

The American Journal of Pharmaceutical Education

THE PROCEEDINGS NUMBER

The Fifty-fourth Annual Meeting was held in Salt Lake City, Utah,
during the week of August 16, 1953

**THE OFFICIAL PUBLICATION OF THE AMERICAN
ASSOCIATION OF COLLEGES OF PHARMACY**

"While much and hopeful improvement in course and curriculum planning has taken place this year [1953], much needs to be done. Some really vital and far reaching experiments are needed to bring education not only in conformity with the best present pharmaceutical practice, but in conformity with what we have a right to expect the practice of the future to be as well. We must never lose sight of the fact that the test of the quality of education of those who graduated in 1953, is not so much their ability to cope with pharmaceutical practice in 1953, but rather their ability to meet situations as they will exist in about 1973 when the students will have reached, essentially, the peaks of their careers."—Melvin W. Green, Director of Educational Relations, American Council on Pharmaceutical Education.

Volume XVII

October, 1953

Number 4

INSTITUTIONS HOLDING MEMBERSHIP IN THE AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY

Alabama

Alabama Polytechnic Institute, School of Pharmacy, Auburn. (1905)*
L. S. Blake, Dean
Howard College, Division of Pharmacy, Birmingham. (1952)
Woodrow H. Byrum, Dean

Arizona

University of Arizona, College of Pharmacy, Tucson. (1953)
Willis R. Brewer, Dean

Arkansas

University of Arkansas, School of Pharmacy, Little Rock. (1952)
Stanley C. Mittelstaedt, Dean

California

University of California, College of Pharmacy, San Francisco. (1942)
Troy C. Daniels, Dean
University of Southern California, School of Pharmacy, Los Angeles. (1918)
Alvah G. Hall, Dean

Colorado

University of Colorado, College of Pharmacy, Boulder. (1921)
Charles F. Poe, Dean

Connecticut

University of Connecticut, College of Pharmacy, Storrs. (1935)
Harold G. Hewitt, Dean

District of Columbia

The George Washington University, School of Pharmacy, Washington. (1900)
Charles W. Bliven, Dean
Howard University, College of Pharmacy, Washington. (1926)
Chauncey I. Cooper, Dean

Florida

University of Florida, College of Pharmacy, Gainesville. (1925)
Perry A. Foote, Dean

Georgia

Southern College of Pharmacy, Inc., Atlanta. (1948)
Melvin A. Chambers, Dean
University of Georgia, School of Pharmacy, Athens. (1928)
Kenneth L. Waters, Dean

Idaho

Idaho State College, College of Pharmacy, Pocatello. (1927)
E. E. Roscoe, Dean

Illinois

University of Illinois, College of Pharmacy, Chicago. (1900)
Earl R. Serles, Dean

Indiana

Butler University, College of Pharmacy, Indianapolis. (1927)
K. L. Kaufman, Dean
Purdue University, School of Pharmacy, Lafayette. (1901)
Glenn L. Jenkins, Dean

Iowa

Drake University, College of Pharmacy, Des Moines. (1942)
Byrl E. Benton, Dean
State University of Iowa, College of Pharmacy, Iowa City. (1901)
Louis C. Zopf, Dean

Kansas

University of Kansas, School of Pharmacy, Lawrence. (1900)
J. Allen Reese, Dean

Kentucky

University of Kentucky, College of Pharmacy, Louisville. (1900)
Earl P. Slone, Dean

Louisiana

Loyola University, New Orleans College of Pharmacy, New Orleans. (1921)
John F. McCloskey, Dean
Xavier University, College of Pharmacy, New Orleans. (1928)
Lawrence F. Ferring, Dean

Maryland

University of Maryland, School of Pharmacy, Baltimore. (1900)
Noel E. Foss, Dean

Massachusetts

Massachusetts College of Pharmacy, Boston. (1900)
Howard C. Newton, Dean
New England College of Pharmacy, Boston. (1952)
Constantine Meriano, Dean

Michigan

Detroit Institute of Technology, College of Pharmacy and Chemistry, Detroit. (1928)
Curtis H. Waldon, Dean
Ferris Institute, College of Pharmacy, Big Rapids. (1938)
Ralph M. Wilson, Dean
University of Michigan, College of Pharmacy, Ann Arbor. (1900)
Tom D. Rowe, Dean
Wayne University, College of Pharmacy, Detroit. (1928)
Roland T. Lakey, Dean

Minnesota

University of Minnesota, College of Pharmacy, Minneapolis. (1901)
Charles H. Rogers, Dean

Mississippi

University of Mississippi, School of Pharmacy, Oxford. (1913)
E. L. Hammond, Dean

Missouri

St. Louis College of Pharmacy and Allied Sciences, St. Louis. (1900)
A. F. Schlichting, Dean
University of Kansas City, School of Pharmacy, Kansas City. (1948)
Theodore T. Dittrich, Dean

Montana

Montana State University School of Pharmacy, Missoula. (1917)
Jack E. Orr, Dean

Nebraska

The Creighton University, College of Pharmacy, Omaha. (1916)
William A. Jarrett, Dean
University of Nebraska, College of Pharmacy, Lincoln. (1913)
Joseph B. Burt, Dean

New Jersey

Rutgers University, The State University of New Jersey, College of Pharmacy, Newark. (1928)
Roy A. Bowers, Dean

*Denotes year institution was admitted to the Association.

THE AMERICAN JOURNAL OF PHARMACEUTICAL EDUCATION

Volume XVII

October, 1953

Number 4

CONTENTS

Edward C. Reif— <i>Rufus A. Lyman</i>	513-514
Report of the President— <i>Troy C. Daniels</i>	515-524
The Installation Address of the Incoming President— <i>Edward C. Reif</i>	524-541
Recent Progress in Pharmaceutical Education— <i>Melvin W. Green</i>	541-551
The Role of the Pharmacist in Civil Defense— <i>William W. Stiles</i>	552-559
Summary and Evaluation of the Seminar on Pharmacognosy— <i>Lloyd E. Blanch</i>	560-566
Scientific Research from the Viewpoint of the Afterdinner Speaker— <i>Ernest Little</i>	567-575
Reports of Officers Committees and Delegates at the 1953 Meeting in Salt Lake City.....	576-705
Report of Secretary-Treasurer, p. 576; Executive Committee, p. 580; Historian, p. 588; Editor, AJPE, 588; Relation of Boards and Colleges, p. 592; Libraries, p. 597; Activities of Alumni, p. 599; Problems and Plans, p. 600; Status of Pharma- cists in Governmental Service (ACP), p. 602; Educational and Membership Stand- ards, p. 608; Pharmaceutical Research, p. 617; Graduate Study, p. 623; Curriculum, p. 628; Status of Pharmacists in Government Service (Joint), p. 640; ACPE, Inc., p. 654; Predictive and Achievement Tests, p. 659; Audio-Visual Education, p. 662; Constitution and By-Laws, p. 674; Civil Defense Education, p. 675; American Coun- cil Education, p. 679; National Drug Trade Conference, p. 687; Resolutions, p. 690; Annual Meeting, Executive Committees, p. 697; Reorganization Meeting, Executive Committee, p. 702.	
The Editor's Page.....	706-710
Notes and News.....	711-727
Miscellaneous Items of Interest.....	727-733

Robert Latta Crowe (Memorial), p. 727; A Tribute to S. Barksdale Penick, p. 729;
Minutes, Executive Committee, American Foundation for Pharmaceutical Education
(June 29, 1953), p. 730; New Books and General News Items, p. 732.

Published quarterly by the American Association of Colleges of Pharmacy at
Lincoln 8, Nebraska. (Jacob North & Co.) Subscription price \$4.00. Single copies
\$1.00. Entered as second class matter July 1, 1937, at the postoffice at Lincoln 8,
Nebraska, under the Act of August 24, 1912.

Editorial Office: College of Pharmacy, University of Nebraska, Lincoln, Nebraska
Address all communications to the Editor.

Places of Meeting

1. Richmond, Va., May 8-10, 1900
2. St. Louis, Mo., September 19-20, 1901
3. Philadelphia, Pa., September 12-15, 1902
4. Mackinac Island, Mich., August 3-5, 1903
5. Kansas City, Mo., September 7-8, 1904
6. Atlantic City, N. J., September 5-7, 1905
7. Indianapolis, Ind., September 5-6, 1906
8. New York, N. Y., September 4-5, 1907
9. Hot Springs, Ark., September 8-10, 1908
10. Los Angeles, Calif., August 17-18, 1909
11. Richmond, Va., May 4-5, 1910
12. Boston, Mass., August 16-17, 1911
13. Denver, Colo., August 20-22, 1912
14. Nashville, Tenn., August 20-21, 1913
15. Detroit, Mich., August 25-26, 1914
16. San Francisco, Calif., August 6-7, 1915
17. Philadelphia, Pa., September 1-2, 1916
18. Indianapolis, Ind., August 27-28, 1917
19. Chicago, Ill., August 12-13, 1918
20. New York, N. Y., August 25-26, 1919
21. Washington, D. C., May 5-6, 1920
22. New Orleans, La., September 5-6, 1921
23. Cleveland, Ohio, August 14-15, 1922
24. Asheville, N. C., September 3-4, 1923
25. Buffalo, N. Y., August 25-26, 1924
26. Des Moines, Iowa, August 24-25, 1925
27. Philadelphia, Pa., September 13-14, 1926
28. St. Louis, Mo., August 22-23, 1927
29. Portland, Me., August 20-21, 1928
30. Rapid City, S. Dak., August 26-27, 1929
31. Baltimore, Md., May 5-6, 1930
32. Miami, Fla., July 27-28, 1931
33. Toronto, Canada, August 22-23, 1932
34. Madison, Wis., August 28-29, 1933
35. Washington, D. C., May 7-8, 1934
36. Portland, Ore., August 5-6, 1935
37. Dallas, Texas, August 24-25, 1936
38. New York, N. Y., August 16-17, 1937
39. Minneapolis, Minn., August 22-23, 1938
40. Atlanta, Ga., August 21-22, 1939
41. Richmond, Va., May 6-7, 1940
42. Detroit, Mich., August 18-19, 1941
43. Denver, Colo., August 17-18, 1942
44. Columbus, Ohio, September 9-10, 1943
45. Cleveland, Ohio, September 7-8, 1944
46. Washington, D. C., (Executive Committee, only),
November 8-10, 1945
47. Pittsburgh, Pa., August 25-27, 1946
48. Milwaukee, Wis., August 24-25, 1947
49. San Francisco, Calif., August 8-10, 1948
50. Jacksonville, Fla., April 24-26, 1949
51. Atlantic City, N. J., April 29-May 2, 1950
52. Buffalo, N. Y., August 26-28, 1951
53. Philadelphia, Pa., August 21-22, 1952
54. Salt Lake City, Utah, August 16-18, 1953

Past Officers of the Association

PRESIDENTS

*Albert A. Prescott.....	1900-01	Edward Spease.....	1927-28
*Joseph P. Remington.....	1901-02	*Andrew G. DuMez.....	1928-29
*Edward Kremers.....	1902-03	*J. Grover Beard.....	1929-30
*Henry H. Rusby.....	1903-04	*Julius W. Sturmer.....	1930-31
*George B. Kauffman.....	1904-05	*Townes R. Leigh.....	1931-32
*Henry M. Whelpley.....	1905-06	Charles H. Stocking.....	1932-33
*James H. Beal.....	1906-07	*L. D. Havenhill.....	1933-34
*John T. McGill.....	1907-08	Ernest Little.....	1934-35
*Henry P. Hynson.....	1908-09	Robert C. Wilson.....	1935-36
*William M. Searby.....	1909-10	*Theodore J. Bradley.....	1936-37
*Julius O. Schlotterbeck.....	1910-11	*William G. Crockett.....	1936-37
*Albert H. Clark.....	1912-13	Hugh R. Muldoon.....	1937-38
*Albert Schneider.....	1913-14	Earl R. Serles.....	1938-39
*Frederick J. Wulling.....	1914-15	Charles H. Rogers.....	1939-40
*Harry V. Arny.....	1915-16	*H. Evert Kendig.....	1940-41
Rufus A. Lyman.....	1916-17	Rudolph A. Kuever.....	1941-42
*Henry Kraemer.....	1917-18	Howard C. Newton.....	1942-43
*Charles B. Jordan.....	1918-19	Forest J. Goodrich.....	1943-44
*Wortley F. Rudd.....	1919-20	Glenn L. Jenkins.....	1944-46
Wilber J. Teeters.....	1920-21	Henry S. Johnson.....	1946-47
*Clair A. Dye.....	1921-22	Arthur H. Uhl.....	1947-48
*Charles H. LaWall.....	1922-23	J. Lester Hayman.....	1948-49
*Charles W. Johnson.....	1923-24	Bernard V. Christensen.....	1949-50
*Washington H. Zeigler.....	1924-25	Hugo H. Schaefer.....	1950-51
Edward H. Kraus.....	1925-26	J. Allen Reese.....	1951-52
David B. R. Johnson.....	1926-27	Troy C. Daniels.....	1952-53

VICE-PRESIDENTS

*Joseph P. Remington.....	1900-01	*Andrew G. DuMez.....	1926-27
*Edward Kremers.....	1901-02	Henry M. Faser.....	1927-28
*Henry H. Rusby.....	1902-03	Charles E. F. Mollett.....	1928-29
*George B. Kauffman.....	1903-04	Earl R. Serles.....	1938-39
*C. Lewis Diehl.....	1904-06	Henry A. Langenhan.....	1930-31
*John T. McGill.....	1906-07	Edward D. Davy.....	1931-32
*Clement B. Lowe.....	1907-08	Robert C. Wilson.....	1932-33
*Alviso B. Stevens.....	1908-09	Ernest Little.....	1933-34
*Elie H. LaPierre.....	1909-10	Antone O. Mickelsen.....	1934-35
Wilber J. Teeters.....	1910-11	Homer C. Washburn.....	1935-36
*Albert H. Clark.....	1911-12	*William G. Crockett.....	1936-37
*Albert Schneider.....	1912-13	Elmer L. Hammond.....	1937-38
Edsel A. Ruddiman.....	1913-14	James M. Dille.....	1938-39
*Harry V. Arny.....	1914-15	*Marion L. Jacobs.....	1939-40
Rufus A. Lyman.....	1915-16	Eugene O. Leonard.....	1940-41
*Theodore J. Bradley.....	1916-17	Perry A. Foote.....	1941-42
*Charles E. Caspari.....	1917-18	A. B. Lemon.....	1942-43
William Mansfield.....	1918-19	Henry S. Johnson.....	1943-44
Julius A. Koch.....	1919-20	*Gordon L. Curry.....	1944-46
*Washington H. Zeigler.....	1920-21	William F. Sudro.....	1946-47
*Evander F. Kelly.....	1921-22	John F. McCloskey.....	1947-48
Charles H. Stocking.....	1922-23	J. Allen Reese.....	1948-49
*Edward V. Howell.....	1923-24	Thomas D. Rowe.....	1949-50
Robert P. Fischelis.....	1924-25	Harold G. Hewitt.....	1950-51
*J. Grover Beard.....	1925-26	Troy C. Daniels.....	1951-52
		L. David Hiner.....	1952-53

* Deceased.

SECRETARY-TREASURER

*Wymond H. Bradbury.....	1900-01	Wilber J. Teeters.....	1913-17
*Wilbur L. Scoville.....	1901-04	*Theodore J. Bradley.....	1917-22
*Julius O. Schlotterbeck.....	1904-08	Zada M. Cooper.....	1922-42
*George C. Diekman.....	1908-10	Clark T. Eidsmoe.....	1942-47
*Charles W. Johnson.....	1910-13	Louis C. Zopf.....	1947-53
		Richard A. Deno.....	1953-

CHAIRMEN OF EXECUTIVE COMMITTEE

*James H. Beal.....	1900-03	*Charles B. Jordan.....	1923-36
*Henry M. Whelpley.....	1903-05	Ernest Little.....	1936-41
*William A. Puckner.....	1905-08	Charles H. Rogers.....	1941-43
Julius A. Koch.....	1908-19	B. V. Christensen.....	1943-48
*Henry Kraemer.....	1919-20	Joseph B. Burt.....	1948-53
Rufus A. Lyman.....	1920-23	Louis C. Zopf.....	1953-
*Deceased			

The American College of Apothecaries at its Salt Lake City meeting went on record as being opposed to any attempt by governmental or other agencies to interfere with the present method of distribution of drugs, pointing out that this method of distribution through wholesale and retail agencies has been both effective and economical and in the best interests of public health. It also urged that since many of the newer therapeutic agents are produced and marketed under different trade names by several different firms, that steps be taken to encourage physicians to prescribe such drugs by the use of their accepted generic names which will make it possible for the patient to receive more prompt and effective service.

More than 200 members were in attendance at the Twelfth Annual Convention which sponsored a public education program which was adopted by the Board of Directors and endorsed by the entire body.

Twenty-seven new Fellows were elected to fellowships.

The following were elected officers for the year 1953-54:

President: Louis B. Longaker of Philadelphia, Pennsylvania
 President: Louis B. Longaker of Philadelphia, Pennsylvania
 President Elect: Louis J. Fischel of Oakland, California
 Vice President: Mearl D. Prichard of Buffalo, New York
 Treasurer: Charles V. Selby of Clarksburg, West Virginia
 Secretary: Robert E. Abrams of Philadelphia.

New members of the Board of Directors are: Wilfred Chagnon of Newton, Massachusetts, and LeRoy A. Weidle, Jr. of Laude, Missouri.

Officers and Executive Committee 1953-54

PRESIDENT

Edward C. Reif.....Pittsburgh, Pennsylvania

VICE-PRESIDENT

Kenneth L. Waters.....Athens, Georgia

SECRETARY-TREASURER

Richard A. Deno.....Ann Arbor, Michigan

PRESIDENT-ELECT

Joseph B. Burt.....Lincoln, Nebraska

EXECUTIVE COMMITTEE

Louis C. Zopf, Chairman.....1954.....Iowa City, Iowa

Lloyd M. Parks.....1954.....Madison, Wisconsin

Heber W. Youngken, Jr.....1954.....Seattle, Washington

George L. Webster.....1955.....Chicago, Illinois

L. David Hiner.....1955.....Salt Lake City, Utah

Rufus A. Lyman, Editor.....Lincoln, Nebraska

Troy C. Daniels, Past-President.....San Francisco, California

Edward C. Reif, President.....Pittsburgh, Pennsylvania

Joseph B. Burt, President-Elect.....Lincoln, Nebraska

Richard A. Deno, Secretary-Treasurer.....Ann Arbor, Michigan

HONORARY MEMBER

Zada M. Cooper.....Villisca, Iowa

Standing Committee Appointments for 1953-1954

1. Committee on Relation of Boards and Colleges

Thomas D. Rowe, General Chairman:

District No. 1 (Me., N. H., Vt., Mass., R. I., Conn.)

Charles W. Bauer, John DeNicola, Maynard W. Quimby*

District No. 2 (N. Y., N. J., Del., Penna., Md., D. C., Va., and W. Va.),

R. Blackwell Smith, H. C. Zeisig, Francis J. O'Brien

District No. 3 (N. C., S. C., Ga., Fla., Ala., Miss., Puerto Rico)

George W. Hargreaves, Floy Macon, Kenneth L. Waters

District No. 4 (Ill., Ind., Ky., Mich., Ohio, Wis.)

Earl P. Slone, E. M. Josey, Edward J. Rowe

District No. 5 (Ia., Minn., Nebr., S. Dak., N. Dak.)

James W. Jones, Oscar G. Fladt, J. F. Rabe

District No. 6 (Ark., Kan., La., Mo., Okla., Texas)

W. D. Strother, J. C. Coff, R. O. Bachman

District No. 7 (Ida., Mont., Ore., Wash., Wyo., Alaska)

Heber W. Youngken, Jr., Leib L. Rigg, L. Wait Rising

District No. 8 (Ariz., Calif., Colo., Nev., N. Mex., Utah)

Elmon Cataline, J. B. Heinz, Ewart A. Swinyard

2. Committee on Libraries

Richard A. Deno, Chairman: Glenn Sonnedecker

3. Committee on Problems and Plans

Rufus A. Lyman, Chairman: William Apple, Martin Barr, Joseph A. Bianculli, Frank W. Bope, Edward S. Brady, Elmon Cataline, Melvin A. Chambers, G. E. Cwalina, Dwight L. Deardorff, George P. Hager, Jr., Raymond E. Hopponen, Paul Jannke, Hurd M. Jones, James W. Jones, Theodore King, Alfred N. Martin, Jr., Clifton E. Miller, Albert H. Musick, Milton L. Neuroth, Charles F. Poe, William A. Prout, Edward J. Rowe, V. H. Simonian, W. D. Strothers, Raymond W. VanderWyk, Kenneth Waters, Allen I. White, Arthur G. Zupko.

4. Committee on Status of Pharmacists in Government Service

Charles H. Rogers, Chairman: Noel E. Foss, Earl R. Series.

5. Committee on Educational and Membership Standards

Arthur E. James, Chairman: Haakon Bang, Chauncey I. Cooper, Forest J. Goodrich, David W. O'Day.

*The first named is Chairman of the Colleges; the second is Chairman of the Boards; the third is the Secretary.

6. **Committee on Curriculum**

Stephen Wilson, Chairman: Walter H. Hartung, Charles V. Netz, Robertson Pratt, Arthur Purdum, Richard K. Thoms, Linwood F. Tice.

SPECIAL COMMITTEE APPOINTMENTS

A. **Committee on Predictive and Achievement Tests**

Edward A. Brecht, Chairman: Roy Bowers, Louise W. Busse, John F. McCloskey, Jack E. Orr.

B. **Council on Conference of Teachers**

Paul C. Olsen, Chairman, (elected). Other elected members: Donald C. Brodie, Roy C. Darlington, Edward P. Claus, Melvin W. Green, Maynard W. Quimby. Appointed member: H. G. Hewitt.

C. **Committee on Audio-Visual Education**

Donald C. Brodie, Chairman: Nicholas W. Fenney, Robert W. Sager, E. A. Swinyard, Ralph F. Voight, Heber W. Youngken, Jr.

D. **Committee on Constitution and By-Laws**

Lloyd M. Parks, Chairman: J. Lester Hayman, Elliott E. Leuallen.

E. **Committee on Civil Defense Education**

James H. Kidder, Chairman: Robert P. Fischelis, Noel E. Foss, William W. Stiles, George L. Webster, J. H. Wurdack.

F. **Committee on Committees**

George L. Webster, Chairman: B. V. Christensen, Karl L. Kaufman, Arthur H. Uhl.

SPECIAL APPOINTMENTS

Delegates to the American Council on Education

George Webster, 1954; Charles W. Bliven, 1955; Hugh C. Muldoon, Francis J. O'Brien, Richard A. Deno, Joseph B. Sprowls.

Representatives to the American Council on Pharmaceutical Education

Troy C. Daniels, 1954; B. V. Christensen, 1956; Hugo H. Schaefer, 1958.

Representative to the National Drug Trade Conference

Hugo H. Schaefer, 1954; Roy A. Bowers, 1955; Charles W. Bliven, 1956.

Representatives to the Druggist Research Bureau

Paul Olsen, Chairman: E. R. Serles, Joseph Goodness.

Delegates to the House of Delegates of the American Pharmaceutical Association

J. Allen Reese, Voting Delegate; Howard C. Newton, Alternate Delegate; Forest J. Goodrich, Alternate Delegate.

Representative to the National Wholesale Druggists Association

Alvah G. Hall.

Directors of the American Foundation for Pharmaceutical Education

(Representing the AACP but elected by the Foundation): H. C. Newton, 1953; Hugo H. Schaefer, 1956; George L. Webster, 1956; Louis C. Zopf and Richard A. Deno, Ex-Officio.

Representative to the American Association for the Advancement of Science

Ray S. Kelley.

Council on Conference of Teachers (formerly Committee)

Chairman..... Paul C. Olsen

Vice-Chairman..... Roy C. Darlington

Secretary-Treasurer..... Edward P. Claus (3rd year of 3-year term)

(Other elected members are Maynard W. Quimby, Melvin W. Green, and Donald C. Brodie

(Member appointed by the president of AACP is H. G. Hewitt

Section of Teachers of Biological Sciences

Chairman..... Ewart A. Swinyard

Vice-Chairman..... G. F. Reddish

Secretary-Treasurer..... Robert L. Van Horne

Representative..... Maynard W. Quimby (1st yr. of 2-yr. term)

Section of Teachers of Chemistry

Chairman..... George P. Hager

Vice-Chairman..... Ray S. Kelley

Secretary-Treasurer..... Lee F. Worrell

Representative..... Melvin W. Green (1st yr. of 2-yr. term)

Section of Teachers of Pharmacy

Chairman..... Herman O. Thompson

Vice-Chairman..... L. E. Bingenheimer

Secretary-Treasurer..... Byrl E. Benton

Representative..... Roy C. Darlington (2nd yr. of 2-yr. term)

Section of Teachers of Pharmacy Administration

Chairman..... Charles C. Rabe

Vice-Chairman..... John A. Lynch

Secretary-Treasurer..... Joseph H. Kern

Representative..... Paul C. Olsen (2nd yr. of 2-yr. term)

Section of Teachers of Graduate Instruction

Chairman..... George P. Hager

Vice-Chairman..... Ewart A. Swinyard

Secretary-Treasurer..... Melvin W. Green

Representative..... Donald C. Brodie (1st of 2-yr. term)

The American Journal of Pharmaceutical Education

THE PUBLICATION COMMITTEE

RUFUS A. LYMAN
Editor

LOUIS C. ZOPF
Chairman, Executive Committee

RICHARD A. DENO
Secretary

COLLABORATORS

Albers, C. C.....	University of Texas
Alstodt, Berl S.....	Long Island University
Bhatia, V. N.....	State College of Washington
Blockstein, William L.....	University of Pittsburgh
Brady, Edward S.....	University of Southern California
Clark, Ralph W.....	University of Oklahoma
Cole, B. Olive.....	University of Maryland
Cosgrove, Frank P.....	University of Nebraska
Crandall, J. Verne.....	Detroit Institute of Technology
Cwalina, Gustav E.....	Purdue University
Darlington, Roy C.....	Howard University
Dodge, Austin A.....	University of Mississippi
Dandreaux, John L.....	St. John's University
Drommond, Fred.....	University of Colorado
Eidsmoe, Clark T.....	South Dakota State College
Eller, John J.....	University of California
Ferguson, Hugh C.....	University of New Mexico
Galloway, J. Earl.....	Drake University
Geller, Frederick L.....	West Virginia University
Hallinan, Gertrude M.....	Columbia University
Hargreaves, George W.....	Alabama Polytechnic Institute
Hawkins, Doris B.....	University of Arizona
Hogstad, Jr., Anton.....	University of Toledo
Hopponen, Raymond E.....	University of Kansas
Ireland, Edward J.....	Loyola University
Jones, James W.....	State University of Iowa
Jones, Martha J.....	University of Houston
Johnson, Carl H.....	University of Florida
Kelly, Charles J.....	Xavier University
Kowalewski, Joseph.....	University of Cincinnati

Kramer, John E.....	Philadelphia College of Pharmacy & Science
Lord, Jr., Clifton F.....	Creighton University
Maier, Augustus A.....	University of Connecticut
Mariano, Constantine N.....	New England College of Pharmacy
Martin, Alfred N.....	Temple University
Melendez, Esteban N.....	University of Puerto Rico
Meyer, Minnie M.....	Southern College of Pharmacy, Inc.
Mittelstaedt, Stanley G.....	University of Arkansas
Miller, Clifton E.....	North Dakota Agricultural College
Murray, Daniel H.....	University of Buffalo
Musick, Albert H.....	University of Tennessee
Nelson, John W.....	The Ohio State University
Netz, Charles V.....	University of Minnesota
Neuroth, M. L.....	Medical College of Virginia
O'Brien, J. Francis.....	Albany College of Pharmacy
O'Day, David W.....	University of Wyoming
Ohmart, Leslie M.....	Massachusetts College of Pharmacy
Osborne, George E.....	University of Utah
O'Toole, William C.....	Duquesne University
Prout, William A.....	Medical College of South Carolina
Rising, L. Wait.....	University of Washington
Rist, Walter.....	St. Louis College of Pharmacy
Rivard, W. Henry.....	Rhode Island College of Pharmacy
Rodman, Morton J.....	Rutgers University
Rost, William.....	University of Kansas City
Rowe, Edward J.....	Butler University
Rowland, Ivan.....	Idaho State College
Scarbough, Robert S., Jr.....	Texas Southern University
Schermerhorn, John W.....	George Washington University
Sciuchetti, Leo A.....	Oregon State College
Semeniuk, Fred.....	University of North Carolina
Slone, Earl P.....	University of Kentucky
Smith, Albert C.....	Ohio Northern University
Sonnedecker, Glenn A.....	University of Wisconsin
Stokes, Robert C.....	University of South Carolina
Strother, W. D.....	Southwestern State College
Suchy, John F.....	State University of Montana
Terry, R. E.....	University of Illinois
Valenzuela, Patrocinio.....	University of the Philippines
Waters, Kenneth L.....	University of Georgia
White, Alfred J.....	Fordham University
Wilson, Bernice.....	Wayne University
Wilson, Ralph M.....	Ferris Institute
Wilson, Stephen.....	University of Pittsburgh
Wintter, John E.....	Howard College, Birmingham
Worrell, F. Lee.....	University of Michigan

NOTICE!

The date for the 1954 Summer Seminar for Teachers has been set for the week of August 15, preceding the annual convention of the APhA in Boston. The Seminar will be held on the campus of the University of Connecticut at Storrs.

The Editor regrets that he has been unable to obtain a copy of the most excellent and stimulating address of Dr. Adam S. Bennion entitled, "The Value of Pre-Professional Training for Pharmacy" which he gave at the joint dinner of the Boards and Colleges. It is his hope it will be available for publication in the January, 1954 number. With this exception, the present number gives a fairly complete coverage of the 1953 meeting.

The Board of Grants of the American Foundation for Pharmaceutical Education meeting in Washington on August 25, 1953, unanimously elected Dr. Ernest Little to the chairmanship of the Board, succeeding Dr. Guy Stanton Ford upon his retirement on August 31. Dr. A. J. Brumbaugh was unanimously elected vice-chairman. The other members of the Board are Charles J. Lynn and Robert Lincoln McNeil.

The Board also selected five additional Fellows for graduate study during 1953-54. Their names, schools where each will study and the major subject of each are as follows: Dale H. Cronk, University of Iowa, pharmacy; J. Z. Kreganoski, University of California, pharmaceutical chemistry; Frank W. Martin, Washington University (St. Louis), pharmacognosy; Philip C. Merker, Purdue University, pharmacology; John J. Sciarra, University of Michigan, pharmacy.

These latest awards are in addition to the 31 new Fellows studying at 22 universities, announced on May 19. The Board also approved continuation of other Fellowships for the current academic year.

The Foundation has awarded 71 new and renewed Fellowships for 1953-54 and 7 Fellows are continuing their studies under previous awards. Over 300 awards have been made since 1947, providing a flow of graduate trained men into the drug industry and the colleges of pharmacy.



EDWARD C. REIF, *President*

1953-1954

Edward C. Reif

Edward C. Reif was born in Pittsburgh, Pennsylvania on January 8, 1888, the son of Edward Mathias and Julia (Hess) Reif. His ancestors were the kind of people who do things; the father and both grandfathers were contractors in the city of his birth.

His early education was obtained in the public schools of Pittsburgh. In 1904 he enrolled in the Western University of Pennsylvania (now the University of Pittsburgh) and graduated with the highest honors in 1906, receiving the Ph.G. degree. In 1916 he was awarded the Ph.C. degree by the University of Pittsburgh (then Pittsburgh College of Pharmacy) and was given the Pharm.D. in 1919 by the University of Pittsburgh.

During 1923-24 Dr. Reif did post-graduate work at Thiel College and in 1925, at the University of Michigan and in 1938 at the Post Graduate Medical Hospital in Chicago. During 1939 he carried on research at Stanford University Medical School. Until 1914 he was engaged in retail pharmacy, having begun his apprenticeship in 1902 in Allegheny, Pennsylvania. In 1914 he became the pharmacist in McKeesport Hospital. From there he entered the Army service in World War I with the Gas Defense Section of the Chemical Warfare Service, working under the late Dr. Arthur S. Loevenhart, Chief of Pharmacology Investigation of the Defense Section of the Chemical Warfare Service and Professor of Pharmacology at the University of Minnesota. He was mustered out in December of 1918 as a Sergeant and later commissioned as a First Lieutenant in the Sanitary Corps Reserves.

Dr. Reif began his teaching career in 1918 as an assistant in chemistry in the University of Pittsburgh School of Pharmacy (then the Pittsburgh College of Pharmacy). He was advanced in rank as follows: in 1923, assistant professor of materia medica; in 1925, professor of physiology; in 1933, professor of botany and materia medica; in 1945, professor of materia medica and biology; and in 1946, professor of pharmacology, a position he now holds. He was appointed acting dean in 1942, and dean in 1945. He was asso-

ciate director of Lake School of Biology (summer) in 1942. He is a full member of the graduate faculty of the University of Pittsburgh and a lecturer in the University of Pittsburgh School of Medicine. He is a member of the Advisory Staff of the Western Pennsylvania Psychiatric Hospital and Clinic and of the Senior Staff and Consulting Pharmacologist of St. Johns General Hospital and lecturer in the School of Nursing. He is a member of the American Association for the Advancement of Science, the National Education Association, the Pennsylvania Academy of Science, the Academy of Arts and Science of Pittsburgh, the Western Pennsylvania Botanical Society and the national, state and local pharmaceutical associations where he has held and still holds important committee appointments. He is a member of many fraternal organizations including the honor societies of Sigma Xi and Rho Chi and is active in the Masonic Order.

The Dean's special field is pharmacology. He has authored a laboratory manual on introductory experimental pharmacology and bioassay and published frequent monographs in the standard pharmaceutical journals and has often appeared on television and radio programs in his field.

On June 14, 1920, Dr. Reif married Isabel Adams who died in 1938, leaving one son, Edward Adams Reif (B.S., and B.S. in Pharm., University of Pittsburgh) who is now married and the father of David Adams Reif and Cheryl Lynn Reif.

On June 17, 1946, Dean Reif married Thelma C. Carr, A.B., Litt. M. Dean and Mrs. Reif are currently engaged in writing the history of the first seventy-five years of the School of Pharmacy of the University of Pittsburgh.

The Dean is a Lutheran, in politics, a republican and a pillar of both. His record of accomplishment, the breadth of his training and his wealth of experience qualify him for leadership in pharmaceutical education and gives assurance that progress will be made during his term of office. His record and ability has won the respect of his colleagues and his friendliness and modesty has won the affection of all who know him. The American Association of Colleges of Pharmacy did well in placing Edward C. Reif at the helm.

RUFUS A. LYMAN

Report of the President

TROY C. DANIELS

University of California, College of Pharmacy

This is the first time our Association has held its meetings in Salt Lake City. Here, in 1847, Brigham Young and a small group of his followers founded the "City of the Saints" and pioneered in the development of this great Rocky Mountain area. It is not surprising that the fertile valley of the Great Salt Lake, with its beautiful panorama of the Wasatch Mountains, was selected as the site for the development of this metropolitan area, which since has become a prominent research and educational center. It is the home of the State University and of the College of Pharmacy, the staff of which last week graciously hosted the Teachers Seminar on Pharmacognosy and Related Subjects with typical Western hospitality. We pay tribute to our hosts and to those early pioneers who founded this beautiful city and who also played such an active part in the expansion and settlement of the West.

During the past five years substantial progress has been made by our member schools and colleges in obtaining improved facilities for pharmaceutical education; more so, I believe, than at any other time in the history of our Association. Approximately forty-five per cent of the member colleges have acquired, or will soon have at their disposal, new physical facilities. There has been a slow but constant improvement in the faculty-to-student ratio and in the quality of teaching personnel. Progress has been made in improving admissions standards and curricula. In 1951-52 eight member colleges offered a curriculum of five or more years and in 1952-53 the number increased to thirteen in this category. Noteworthy progress has been achieved, but additional improvements are most urgently needed in many aspects of our educational program.

The Need for General Education

Pharmacy is the only major health profession not requiring pre-professional education as a basis for admission to the professional curriculum. The present minimum four-year curriculum has been

stretched to the breaking point. We have member colleges requiring as much as 21 units per semester in order to include nonprofessional courses required by their parent institutions. At least two university presidents have observed that the present minimum curriculum is deficient in the requirements for a defensible baccalaureate degree. The present overcrowded curriculum provides too little time for general education and does this at the expense of professional education. Starting in 1948 at the San Francisco meetings and each year since, there has been discussion of the curriculum in terms of two specific deficiencies: namely, general education and professional course content. While these problems are interrelated, I shall confine my remarks to the need for general education. In the Report of the Harvard Committee, "General Education in a Free Society", the term general education is defined as . . . "that part of a student's whole education which looks first of all to his life as a responsible human being and citizen . . ."

Professor Elten Mayo, a member of the Department of Industrial Research of the Graduate School of Business Administration of Harvard University, after twenty years of studying industrial relations in the United States, comments in the book, "The Social Problems of Industrial Civilization":

"We have failed to train students in the study of social situations; we have thought that first-class technical training was sufficient in a modern mechanical age. As a consequence, we are technically competent as no other age in history has been; and we combine this with utter social incompetence. This defect of education and administration has of recent years become a menace to the whole future of civilization."

Bernard Baruch in speaking at the Charter Day Exercises of The City College of New York in May of this year was quoted by the press as having referred to our time as "the age of distraction." Mr. Baruch states, and I quote:

"Thinking has become a generally neglected art. The miraculous forms of communication—highspeed presses, jet-propelled planes, radio, movies, television—seem less conducive to thought than a log in the woods. Almost, in fact, these jet-propelled, streamlined means of communication appear the enemies of thinking. They bombard us daily with fresh distractions and new alarms . . . Our colleges and universities have tended more and more to emphasize technical skill rather than thinking ability . . . We perform miracles almost daily in our laboratories but fumble like children when governing ourselves."

Wallace B. Donham, Dean of the Graduate School of Business Administration, Harvard University, has observed the intellectual characteristics of some 12,000 graduates of approximately 500 undergraduate colleges and technical schools. In his book, "Education for Responsible Living", he comments as follows:

"Surely, high among the aims of education is the training of men to take significant part directly or indirectly in the purposeful activities of their times. Indeed this is its primary function. It is especially important in a democracy . . . Our democracy is strong in specialized progress and weak both in general direction and in the ability to work together. To some extent this is the necessary cost of individual freedom and initiative. But clearly we have lost balance. Too many things are done shortsightedly—not viciously, as the devil-hunter would have us believe, but because men do not understand or stop to consider the longer-time social implications of their activities. Too many reforms are instituted by government to meet immediate problems with no conception of the stresses and strains the reforms will inevitably bring and no watchfulness to offset their unforeseen consequences. We are too slow in adapting ourselves socially."

Dean Donham was writing in support of general education but had he intended his statement to describe the situation we have in pharmacy it is difficult to see how it might have been improved. He further pointed out that "effective general education is essential to effective leadership and cooperative effort in a free democracy." Repeatedly, informed educators have pointed to the deficiencies in general education offered in most scientific and professional curricula. If this is true of other professions, what might be said for pharmacy? Because of his constant contact with the public at a level that commands mutual respect, the pharmacist to a greater extent than most professional men and women needs to understand the basic problems of our civilization. He needs a broad perspective that will enable him to make intelligent decisions at the socio-economic level; and above all he needs educational guidance in the responsibilities associated with living in our contemporary civilization.

Two years of preprofessional education should be an immediate objective of this Association. This is not just a personal opinion nor the opinion of a small number of educators in Pharmacy. Scholars, scientists and professional men and women both in and out of pharmacy have pointed to the need.

All of us agree, I am sure, that our primary objective, and our obligation, is to make available pharmacy graduates who are able to

provide the highest quality of professional service. The majority of our leaders in pharmaceutical education agree that this cannot be accomplished with the present four-year curriculum without a background in "general education". It can be accomplished, however, if the curriculum is relieved of the burden of carrying the basic, elementary courses in botany, chemistry, zoology, English, mathematics, etc., thus leaving time for developing in sequence an adequate professional curriculum. A preprofessional program of two years offers the additional advantage that it gives students an opportunity to learn something of the civilization in which they live and to which they must adapt themselves. No matter how skilled in the technology and how well versed in the science of his chosen field, a professional man cannot hope to achieve maximum development unless he is also informed and equally skilled in the art of living in our present social economic system.

There may be some who fear that the adoption of a preprofessional collegiate requirement will reduce the number of applicants seeking to enroll in schools and colleges of pharmacy. This fear is, I believe, unwarranted. Let us look at our sister professions. Raising the educational qualifications to provide more mature students and better trained graduates has served to improve the quality of their services and not to decrease the number of practitioners. Indeed, by improving the quality of service, these professions became increasingly attractive to able students. The same can be true in pharmacy.

The Committee on Curriculum at the meeting in Philadelphia last year recommended preprofessional education as a requirement for admission to the professional curriculum. The resolution was approved by the Committee on Resolutions and referred to the Executive Committee for further study. Since the resolution was not submitted in the exact wording required for amendment of the By-Laws, it was referred back to the Committee on Curriculum for clarification. In submitting the resolution, the Committee on Curriculum stated that the recommendation was intended to improve pharmacy education by: (1) Admitting more mature students to the professional curriculum; (2) making possible a more effective screening of students for admission to the professional curriculum; (3) providing the time for elective courses in general education,

thereby introducing more effective training for comprehending and contributing to contemporary civilization; (4) reducing excessive credit loads; (5) providing a better sequence of courses; and (6) providing opportunities to enrich the professional curriculum, etc.

I am informed that the Committee on Curriculum will introduce a resolution at this meeting calling for a minimum five-year curriculum by 1960 including prepharmacy instruction with a minimum of three years of professional instruction. This recommendation would make permissive three different programs of study, namely: (1) Five years in which general education is included; (2) one year of preprofessional education and four years of professional; and (3) two years of preprofessional and three years of professional study. Any one of these programs will include some provision for general education in the curriculum, but I believe there are great advantages to be gained by the adoption of uniform minimum educational standards, and *I recommend that this Association go on record as approving in principle two years of preprofessional education as a requirement for admission to the professional curriculum and request the Executive Committee to study ways and means of implementation.* This recommendation, conforming to one of the programs recommended by the Committee on Curriculum, is not incompatible with the Committee's recommendation.

Membership on the Executive Committee

You have been asked to vote on a proposed Amendment to Article VIII of the Constitution which will make the President-elect a voting member of the Executive Committee. At present this officer of the Association serves as an ex-officio member of the Committee without voting privilege.

The President-elect serves the Association for three years, as President-elect, as President and as Immediate Past President. During each of these three terms he is a member of the Executive Committee and is expected to attend the meetings of the Committee at the expense of the Association. I am sure you will agree that an individual who is to be accorded the honor of the office of President of the Association should be duly qualified as a voting member of the Executive Committee. *I recommend that Article VIII of the Constitution be amended as proposed in the call for this meeting.*

Committees of the Association

The activities of this Association are carried on largely through the work of its committees. A total of approximately 150 members are serving the Association on committees, as officers, or as representatives to other organizations. There are ten standing committees and eight special committees in addition to the appointed delegates and representatives. Not infrequently it has been observed that two or more committees may be working on closely related problems which may be handled in a more efficient manner by a single committee working with a specific assignment.

In reviewing the Annual Reports and activities of the Association for the past decade, one gains the impression that too little time and effort have been given to long-range planning of the affairs of the Association. This weakness appears to be largely due to our committee organizational pattern. If the Association is to derive the maximum benefit from its committees, each committee must have a clearly defined scope and function.

Following the Philadelphia meeting, with the approval of the Executive Committee, a Committee on Committees was appointed for the purpose of conducting a careful study and evaluation of the Committee program of the Association. Specifically the Committee under the chairmanship of Dr. George L. Webster has been requested to undertake the following:

- 1) To review the functions of each of the standing and special committees of the Association;
- 2) To determine the proper scope of the activities of each committee;
- 3) To restate the functions of each committee in the light of the over-all study;
- 4) To make recommendations for the continuance or discontinuance of existing committees or for the establishment of new ones as may be deemed necessary.
- 5) To present the findings and recommendations of the Committee in a form such that, should they receive approval of the Association, they may be published as a part of, or as an appendix to the By-Laws.

The Committee has made excellent progress during the current year and an interim report will be submitted at this meeting.

I recommend that the Committee on Committees be continued for 1953-54, or until there is time for the completion of this important study.

Educational Objectives in Hospital Pharmacy

The improvement in pharmacy service that has taken place in many of our hospitals during the past ten years has been a source of satisfaction to all members of the profession. Excellent leadership has been shown by our hospital pharmacists and significant progress has been achieved. The American Society of Hospital Pharmacists has actively pursued ways and means of improving pharmacy service in the hospital and has greatly aided in the development of this specialized area of pharmacy. It is also proper that we should acknowledge the contributions of the American Pharmaceutical Association and the American Hospital Association for their interest in fostering sound educational and professional objectives in hospital pharmacy.

The future of hospital pharmacy, like all branches of pharmacy, will depend in a large measure on the educational background and professional perspective of its practitioners. Programs in hospital pharmacy education are being established in an increasing number of our colleges. Some are being set up as undergraduate programs, others as graduate programs leading to advanced degrees. In some, the instruction is offered by the hospital pharmacy staff, in others by members of the College of Pharmacy staff who may or may not be adequately prepared for responsible teaching in this area. Some institutions offer internships, others are contemplating doing so. The Committee on Minimum Standards of the American Society of Hospital Pharmacists has proposed the classification of internships as "academic" and "nonacademic". It is abundantly evident that the educational and training programs in hospital pharmacy are quite diverse in character and in need of careful evaluation. Educational and professional objectives in hospital pharmacy should be clearly defined and a more uniform program of education and training initiated.

Last year this Association approved increasing the size of the Committee on Curriculum to provide for a representative from hospital pharmacy. Dr. Arthur Purdum was named to the Committee and a Subcommittee on Hospital Pharmacy was appointed under

the chairmanship of Dr. Stephen Wilson to study and make recommendations on an educational program for hospital pharmacy. A report of the activities of the Committee will be submitted at this meeting. I believe there is need for a special Joint Committee on Hospital Pharmacy Education, since the next few years appear to be a critical period during which important decisions must be made concerning the education of hospital pharmacists for the future. If a joint committee is established, the American Society of Hospital Pharmacists should be consulted and should be responsible for selecting its own representatives. *I recommend that this problem be referred to the Executive Committee for study and if the appointment of a special joint committee is deemed desirable, I further recommend that the matter be considered jointly with the American Society of Hospital Pharmacists.*

General Problems

There are a number of general problems that directly or indirectly relate to our schools and colleges and the activities of the Association. I want to direct your attention to three such problems that I believe to be of major importance: 1) *District Meetings of Boards and Colleges.*—The degree of success that the Association can achieve in attaining its educational aims and objectives, will depend largely on its ability to make timely and effective use of the contributions made by its members and component parts. Much of the strength and effectiveness of the NABP and the AACP comes from the District Meetings of the Boards and Colleges. During the past few months I was privileged to attend three district meetings, and as a result of this experience and earlier observations, I believe the two respective parent organizations are not utilizing, to the maximum extent, the potential that these meetings have for making important contributions. They are best able to consider some of our long-range problems and plans and should be given greater assistance in the development of programs designed to promote approved educational and professional objectives. Too little attention appears to have been given to this important phase of Association work. The Executive Committee, in suggesting topics for the district meetings, should state the reasons for its selection and outline, in a general way, the problems involved. Likewise, the district offi-

cers, responsible for the program, should give careful consideration to the agenda for the meeting in terms of clearly defined objectives.

When district meetings are held in the vicinity of a college of pharmacy, students should be urged to attend the meetings. Likewise, all pharmacists in the community should be invited to attend and participate in the meetings. Many of our educational problems relate as much to the practitioners of pharmacy as to the educator. The district meetings offer excellent opportunities to improve our intraprofessional relations and to inform the practicing pharmacist on problems that are vital to the profession. We should not neglect this opportunity.

2) *Restrictive Federal and State Legislation.*—In recent years laws have been adopted that impose undue hardships on pharmacy and weaken the position of the pharmacist to discharge his duties in the best interest of public welfare. This type of restrictive legislation is sure to have a harmful effect on our schools and colleges in that regimentation will make it increasingly difficult to attract as students able young men and women who have initiative.

The restrictive legislation that has already been imposed, together with the appeal for additional restrictions, constitute, in the final analysis, an expression of lack of confidence on the part of the government for what takes place in pharmacy. The elected representatives of the people are saying in effect that the pharmacy profession is not able to control itself from within and that public interest requires that it must be controlled through legislative channels. Unfortunately, this restrictive legislation seeks to resolve problems that in the long run can be resolved only through education. I am sure you will agree that constructive attentions needs to be given this problem.

3) *Status of Pharmacists in the Armed Forces.*—For many years the Association has maintained a standing committee on the Status of Pharmacists in Government Service. This committee, working jointly with representatives of the American Pharmaceutical Association, the National Association of Boards of Pharmacy, and the National Association of Retail Druggists has made substantial progress in gaining recognition for pharmacists in various governmental agencies and in the Armed Forces.

In recent months it has been brought to my attention that there is need to re-evaluate the services of the pharmacist in the Armed Forces. Uniformly pharmacists in the Armed Services have expressed dissatisfaction with the opportunities for promotion. Medical officers have pointed out that it is their belief that if more pharmacy officers of high rank were available there would be greater use of the professional services offered by the pharmacist. While I am not fully informed on these matters, I am sure you will agree that there is need for factual information that will serve as a basis for the re-evaluation of the status of the pharmacist in our Armed Forces.

Acknowledgment

During my term of office as president, I have received the most generous cooperation and assistance of many members and officers of the Association. To each of them I extend my thanks and appreciation. I wish also to express appreciation to the American Foundation for Pharmaceutical Education for its continuing support of: The American Journal for Pharmaceutical Education; the American Council on Pharmaceutical Education; the pharmaceutical seminars; undergraduate scholarships and graduate fellowships; and for its unselfish interest and efforts to improve and strengthen pharmaceutical education through our Association.

The Installation Address of the Incoming President

EDWARD C. REIF
University of Pittsburgh

It is with real pride and deep appreciation that I accept the obligations and opportunities embodied in becoming President of this Association.

I am well aware of the many difficulties which pharmacy faces today, for my life has been dominated by the profession of pharmacy

for fifty years, and I can assure you that this new undertaking for the coming year is not taken lightly.

A review of the presidential addresses and reports of the past presidents shows that each president was vitally concerned with the problems confronting pharmacy during his term of office.

We have challenges on all sides; to meet these we must face all of them boldly.

It is not my intention to expound abstract discussions at length. Rather, I am concerned specifically with the present and the future.

We have problems in pharmacy, so let us scrutinize them carefully and do our utmost to solve them. We have not the energy to spare in bemoaning our situation in general, nor do we have any expendable energy for petty bickering among ourselves. We need every ounce of energy we can muster collectively to meet our obligations to the profession and to society.

The most popular word in our language these days is "crisis." But may I suggest that a crisis may often become a blessing in disguise. My own feeling has always been that a "crisis" is just another way of saying "a challenge." And in the final analysis, who ever accomplishes anything unless he is challenged to do it? Why not show a united front in pharmacy? If we really mean business, I believe we can turn this so-called crisis into an opportunity for progress which is virtually limitless in scope.

Of course, we educators in pharmacy represent just one phase of the total profession. We are not going to make the world over, all by ourselves. But we can and should put our own house in order, and thus our influence can have profound effects upon our colleagues in the retail, wholesale, manufacturing and other phases of the profession.

We have many, many good points of which to be proud, but too few other people know of them. Therefore, I think our first approach should be one of public relations.

We cannot hope to be respected unless we earn and demand respect.

I would like to see our Association undertake a definite and consistent campaign to publicize pharmacy in a dignified and professional manner. I would further like to see each school in the

Association assume responsibility for good and consistent public relations in its own area of influence. Many of our institutions have public relations counsellors upon whom they can call for help. I think we should share our experience with each other, so that all may profit.

We must think of the future. It cannot be otherwise. Thinking of the present against a background of serious interpretations of the past turns the mind to things ahead. Perfection, nothing less, sought patiently, must forever be our goal.

Public relations is a means of creating understanding and good will toward our field, thereby increasing the public appreciation for the professional services offered by pharmacists.

The courage and clear thinking required to calculate risks successfully and to set an aggressive course has for its objective a greater respect for the field to which we in the general pattern of pharmaceutical education are committed.

Most disturbing, however, is our apparent forgetfulness of the necessity of evaluating ideas of all kinds in attempting to arrive at valid new ones or in attempting to put old ones to good use.

Valid ideas result from the combined efforts of a number of people working hard at the business of arriving at ideas.

Public relations is nothing new. Throughout history people have worried about the problem of getting along well with one another. Public relations as an organized approach, however, is relatively new, and has enjoyed a rapid and dramatic growth over the past several years. Business, industry and educational institutions have been among the leaders in implementing public relations programs.

An eminent public relations counsellor describes public relations in terms applicable to pharmacy: "Public relations is a vital tool of adjustment, interpretation, and integration between individuals, groups and society. Public understanding and support is basic to existence in our competitive system. To know how to get along with the public is important to everyone."

In simpler terms, public relations is doing a good job and receiving credit for it. We all have public relations, good or bad, whether we know it or not. Through good public relations planning, it is possible to present knowledge upon which the public

can make its decisions concerning a group, an institution or an individual. A great amount of public information is gained through mass media. A great many of the public's attitudes and actions are based upon this mass media information.

Such information must be accurate, must follow pre-determined lines of thought and must bring to bear upon the public a heavy impact. To do so, it must be organized and channelled. Public attitudes must be analyzed and evaluated. Policies and procedures must be identified with the public interest.

Why Does the Association Need a Public Relations Program?

Pharmacists generally have maintained good public relations within their customers. Pharmacy schools, too, have good public relations with their communities. This public relations is carried on in almost as many different ways as there are individual pharmacists and pharmacy schools. Such public relations, however, is localized, and lacks the impact necessary really to tell pharmacy's story.

The Association needs and overall public relations program to provide policies and procedures on a nationwide scale. These policies and procedures would serve as a guide for localized and community public relations. We have done a good job in training young men and women to become pharmacists; we have brought to the American people better medicine and better health through better pharmacy; we are an important section of the health team. Few people, however, outside of the profession, know these things.

Perhaps you can see no necessity for telling pharmacy's story to the public. If you need an example, look at the American Medical Association and its problems over the past few years.

Physicians were treating their patients as they had always done, and got along well with them. Medical schools were turning out physicians as rapidly and as well-trained as possible. There were no problems, and medicine in general was snug in the thought that everything was rosy.

Then came the dawn, in the form of "socialized medicine." The public took up the cry for more doctors and better medical facilities, and modern medicine and medical education were in the spotlight.

The public, which had heretofore thought their doctors were doing a fine job, were not quite so sure now. The public had nothing

upon which to base its decisions except information in the public press concerning the "socialized medicine" plans.

The American Medical Association fought back, as we know, but it was an uphill battle all the way. Had they been actively telling medicine's story earlier, the task of combatting "socialized medicine" would have been much easier. Had the public been aware of the AMA's policies—which in reality were in the public's interest—the problem would have been much simpler.

Instead, the AMA had to take the defensive position, always a difficult one. Once a charge is made, it is difficult to refute without leaving doubts. Had the AMA followed the advice of some forgotten sage who said, "The best defense is a good offense," the difficulties would have been much fewer and more easily treated.

I subscribe to that sage's advice. I believe our Association should adhere to his "good offense" suggestion. I believe our Association should establish a department of public relations at the national level. It should be supported by a budget that would permit modest beginnings toward an overall program. It should be responsible for:

1. Studying scientifically the problems facing the pharmacy schools, the individual pharmacist and the profession generally; the misunderstandings that exist; the magnitudes of the problems,
2. Assisting Association officials in formulating generally accepted policies in the public's interest, policies to be followed on all levels, upon which could be built a sound public relations program.
3. Preparing a detailed public relations program to meet and solve these problems and to bring these policies before the public, thereby earning public understanding, public approval and public support,
4. Telling the story of pharmacy and pharmacy education, with frankness and conviction, never hiding the bad but always plugging the good, through the press, radio, television, magazines, motion pictures, publications, etc.

Obviously, such a program cannot be developed overnight, nor will swift public reaction be the result. It must be a long-range development, calculated to educate the public in the ways of pharmacy.

Obviously, too, such a program cannot be accomplished without adequate financial support. Such support, modest at the beginning to be sure, will of necessity have to increase as the program develops and reaches into new areas.

I would urge that we give this serious consideration; that we as pharmacy educators take the offensive now, as have industry, business, education, voluntary organizations, physicians, and countless others. Then, when problems arise, as one day they surely will, they will be of less magnitude because of sound, well-organized public relations policies and procedures.

I have one additional suggestion, and one which would apply with equal force to the schools of pharmacy and all other professional schools. It is simply this. I believe that part of the training of a doctor, a dentist, a nurse, a pharmacist, a lawyer, or a minister should include formal training in the principles of public relations. The professional man today owes a large part of his success to his ability to get along with people, to interpret his problems to them, to win their acceptance of his programs, and to gain their respect. Many people have natural, almost instinctive ability to learn these things; but others do not. I suggest that a course in public relations, or human relations, or whatever you wish to call it, be a part of the curriculum of every professional school.

As individuals, the professional people would benefit; as a group the profession would benefit because of the enlightened direction the professional associations would have.

Our efforts should be aimed at developing a greater appreciation of what pharmaceutical education means to the public and how it operates to their benefit.

People are little interested in the operation of a pharmacy school, but they do want service from the pharmacists in their communities. The schools and colleges of pharmacy have been progressively preparing their students to render these services most efficiently.

If we are going to measure the position of pharmacy and pharmaceutical education in the public mind we must at least entertain the idea that it rates very high. It must rate high in the mind of the teacher, in the minds of our students. If they are not motivated at the time of admission by an inherent desire to progress in the educational pattern, then they must be motivated while in school. This motivation can be successfully carried out only by the teacher in pharmacy and by the product of our schools, the pharmacist.

Professional Relations

Recently there appeared the report of the President's Commission on the Health Needs of the Nation, known as the Magnusson Report. This Commission, appointed by the President of the United States, consisted of representatives from Medicine, Dentistry, International Association of Machinists, National Consumers League, the Farmer, CIO, National League for Nursing, but *no* representative from Pharmacy.

In volume one their findings and recommendations are in part:

Section 1. There is hereby established a commission to be known as the President's Commission on the Health Needs of the Nation, which shall consist of a Chairman and fourteen other members to be designated by the President:

Section. 2. The Commission is authorized and directed to inquire into and study the following:

a. The current and prospective supply of physicians, dentists, nurses, hospital administrators, and allied professional workers; the adequacy of this supply in terms of the present demands for service; and the ability of educational institutions and other training facilities to provide such additional trained persons as may be required to meet prospective requirements.

c. The problems created by the shift of thousands of workers to defense production areas requiring the relocation of doctors and other professional personnel and the establishment of additional facilities to meet health needs.

e. Current research activities in the field of health and the programs needed to keep pace with new developments.

The Commission has one major objective—"During this crucial period in our country's history it will make a critical study of our total health requirements, both immediate and long range, and will recommend courses of action to meet these needs."

The Commission met first on January 14 and 15, 1952, and made four fundamental decisions which guided the commission policy throughout the year. The one important to us is number two: "To reach no conclusions until we have heard all the evidence which could be assembled in the time available and to scour the country to find the experts and unearth the studies which would supply us with basic data."

On page 3 this report also makes the following recommendation: "The physician leads the over-all effort, but as one member of a well-trained team comprised of dentists, nurses, technicians,

and many other professional health workers. Only through such joint endeavor can the whole range of services be delivered."

To be most effective the health team must achieve a smooth continuum of care,—embracing promotion of health, prevention of diseases, diagnosis, treatment and rehabilitation,—all of which is constantly improved through education and research.

The report, volume one, page 11, reads: "Physicians, dentists, nurses, and auxiliary medical workers are the indispensable and irreplaceable core at the center of the provision and distribution of medical care . . . There is no substitute for the skilled surgeon, the precise dentist, the trained resourceful nurse. Good Health Service is never mechanical; it stems from the educated mind, the warm heart and the practiced hands of our many health workers." Pharmacy as a profession is not mentioned in its rightful place.

In one summary of the report the statement is made "far less than necessary is spent for preventive care, and expenditures for drugs are high relative to expenditures for other medical care." The implication here is definitely not correct.

In volume two, page 240, the following statement appears:

"The individual who is interested in promoting his health can take one of several courses. He may seek information from newspaper columns or magazine articles, both good and bad. These are probably the most popular sources of health education. He may purchase vitamin pills, cold medicines or tonics at the corner drug store."

In volume four, page 29, the emphasis is placed upon "Life-saving but expensive drugs" and on page 33 of the same volume is the statement: "catastrophic drug bills which drain the family purse at the same time that other emergency expenses pile up."

In a review of the bibliography the only references made to the field of pharmacy are as follows:

Under the caption—"Drugs and Medicines" the following are listed:

1. American Society of Hospital Pharmacists *Bulletin*
2. P. H. Costello—*Licensure Statistics and Census of Pharmacy*
3. R. P. Fischelis—"Drug Control"
4. J. Solon Mordell—"The R Study of The Pharmaceutical Survey, Monograph 2"

5. C. Rufus Rorem and R. P. Fischelis—"The Cost of Medicines; the Manufacture and Distribution of Drugs and Medicines in the United States and the Services of Pharmacy in Medical Care."

At a panel discussion on training of paramedical personnel, according to the printed report, Dr. Robert P. Fischelis was the only representative of pharmacy who participated.

At a joint panel on Research and Education of Physician, Dentist, Nurse and Paramedical Personnel, there was no representative from Pharmacy.

No official pharmaceutical agency appears in the list of organizations providing technical information and assistance.

In the printed list of witnesses the only names of persons and organizations who presented or filed testimony at the regional hearings conducted in eight major cities are—David Bitner, President of the Pennsylvania Pharmaceutical Association; Dr. Ivor Griffith, President of the Philadelphia College of Pharmacy and Science; and Herman Winkelman of the Retail Druggists Association of Greater St. Louis.

I believe this emphasizes the need for a powerful public and professional relations program. I have offered the foregoing in support of my contention.

We have had the Charters Survey and the recently published Pharmaceutical Survey. We have had many reports, contributions, the Pharmacy Curriculum Committee of the AACP reports, and "The Pharmaceutical Curriculum," but have we taken full advantage of all findings to bring pharmacy where it rightly belongs on an even keel with the other health professions?

A veritable revolution in medical education occurred in 1910, with the publication of the Flexner report, which led the way to sweeping reforms in medical education. Certainly the findings of The Pharmaceutical Survey should, in fact must, accomplish the same in Pharmaceutical Education.

More than thirty paramedical specialists have evolved, including such diverse groups as medical laboratory technicians, X-ray technicians, dietitians, physical, occupational, and speech therapists, medical record librarians, social workers, clinical physiologists, hospital administrators and many others.

The training required for these fields ranges from one year of study after high school to two or more years of postgraduate education.

Thus the improving standards of training in most paramedical fields not only gives increasing assurance of competence and technical reliability, but also attracts more applicants to training institutions.

As you already know, paramedical workers are persons other than physicians, dentists, and nurses who are engaged in the investigation, treatment and prevention of disease and disability and in the promotion of health by virtue of some special skills. In such a list in the President's Commission report, Pharmacists are listed as tenth, placing medical laboratory technicians, X-ray technicians, dieticians and nutritionists, physical therapists, occupational therapists, speech therapists, social workers, clinical psychologists and even midwives ahead.

In connection with public and professional relations, the need for a brochure has long been recognized. The committee appointed by the Executive Committee to prepare a suitable brochure has devoted a tremendous amount of effort and work in preparing it. The preliminary report appears to be quite long and it has certainly covered many of the facets of pharmacy. Certainly it will not be too long for any person seriously concerned with the problem of selecting a career. I believe, though, that a brochure is necessary which will appeal to the prospective student and to the parent. I also think that more thought should be given to our college bulletins so that they can more accurately portray the curriculum to the student. As presently constituted, the bulletins are built up with a vast amount of material which is purely academic and can in the main be interpreted chiefly by committees on admission, registrars and administrative officers.

Public Health

We all know that communities have taken measures to protect the health of their citizens.

As Public Health practice has expanded, have the skills of the pharmacist been recognized and used to the fullest extent?

After all, what is Public Health? It is defined as "The science and art of preventing disease, prolonging life, and promoting physical and mental health and efficiency through organized community efforts."

If this is public health, and I believe it is, should pharmacists be mentioned specifically with physicians, nurses, etc., as a component of the core of public health personnel, or be mentioned as one of the special groups which also participate, such as dentists, health educators, laboratory workers, nutritionists, social workers, statisticians, and veterinarians?

The World Health Organization, a specialized agency of the United Nations, is the directing and coordinating authority in the international aspects of health. It provides technical and advisory services in many phases of Public Health, in which is included *standardization of drugs*. Are we represented?

Should the curricula of pharmacy schools embody some specialized training required for public health activities?

To seek justification for the inclusion of a course in Public Health in the already crowded curriculum of a school of Pharmacy, we might address ourselves to identifying the place of the pharmacist in the field of Public Health.

First of all, the pharmacist is a professional worker in a field which is included in the general classification of the health sciences. Within this field, he may be classified as a co-worker with the physician. As such, he becomes an active member of the so-called "Health Team." Traditionally, like the physician, the pharmacist has been largely concerned with the materials of curative medicine. However, during the last three or four decades, the shelves and especially the refrigerator of the corner drugstore have come to be occupied by an increasingly higher percentage of materials whose use is directed to the preservation of health and the prevention of disease. For example, I direct your attention to vaccine points and other sera and vaccines and even to the ever-present vitamin pills.

Furthermore, we find an increasing number of pharmacists rendering direct service in the public health field as employees of health agencies, official or voluntary, especially those charged with responsibility for the care of the indigent sick. Others are serving the state or federal agencies concerned with regulation and stand-

ardization of drug products. In fact, in the broadest sense, any professional function performed by the pharmacist which is not a direct service to an individual but rather an organizational service to the public or groups of individuals takes him into the field of Public Health as it is broadly conceived of today.

In this category of service, we cannot escape the unofficial (and often involuntary) function which the pharmacist performs in the field of health education. We must recognize the fact that, as a professional person supposedly informed on matters pertaining to health and easily accessible to the general public, the pharmacist is the logical target for requests for all sorts of information on health matters. Some of this he has been taught to refer to the physician but to a great many questions he can and quite properly should provide an authoritative answer. Whether he likes it or not, he will find himself called upon for an opinion as to the danger or usefulness of fluorides or chlorine in the town water supply, the control of pests, the local school health program, the need for a new hospital and countless like matters.

It seems to me, therefore, that it is incumbent upon us, as educators, to equip the graduate in pharmacy to perform, as intelligently as possible, in the field I have briefly and imperfectly sketched. Certainly, the least we can do is to provide him with a background of knowledge as to the modern concept of Public Health—its organizational structure, history, functions and development—and either tell him or allow him to draw his own conclusions as to his place as a pharmacist in it.

Finally, in this connection, let me dwell for a moment upon an educational by-product that need not necessarily be related to the professional functions of the pharmacist. By providing an introductory background in public health, we have created an informed citizen. Progress in public health depends upon an intelligent understanding and leadership among the population whose health is being furthered or protected. A professional background need be only incidental to this understanding and this capacity for leadership but the ability to comprehend and the power to *think* about health problems is fundamental to it. The preparation of our students for community leadership as citizens is probably as significant as their training as professionals.

In-Service Training

Epoch-making discoveries and contributions by many hundreds of scientists have opened up vast areas of research in the fields of nutrition, endocrinology, hematology, therapeutics, pharmacology, pathology, and many other sciences.

Many examples may be cited in which individuals or groups of individuals conducted their series of experiments to prove or disprove a very simple observation. Inquisitiveness or thirst for knowledge, or a desire to accomplish something worthwhile was in many instances the impetus behind the work which often resulted in important discoveries. These have proved beneficial to all mankind.

The large pharmaceutical manufacturers, with their staffs of pharmacists, pharmacologists, chemists and other workers, prepare the material for convenient use, with proper checks for purity, potency and stability.

The retail pharmacists, as the proper purveyors to the physicians and the public, then dispense these medicaments, either alone or compounded with others. They know how materials differ from each other, their storage, their incompatibilities, their dosage. The constant multitudinous influx of new materials requires constant attention.

While no concrete data is available, I am of the opinion that many teachers in schools of pharmacy, regardless of the areas of instruction, have little contact with the drug store whether it be of the strictly professional type, the community store, the self-service store, or the chain stores. Most information at their command regarding drug stores is what has been conveyed to them by alumni or by students working in stores.

The physician serves his internship in the hospital and we are all aware of the fact that he is able to keep intimate contact with his patients. If he is progressive, he translates the trends of his profession to the benefit of his patient. The dentist functions somewhat in the same manner. The same may be said of the nurse. The teacher in the school of engineering in a great many cases is able continuously to keep abreast of the advances in his profession by acting as a consultant.

It appears that many teachers of pharmacy fail to keep a finger on the pulse of what is transpiring in the present-day drugstore.

I have been in contact with pharmacy for fifty years, thirty-five of which have been devoted to teaching. Until the last ten years, I considered it a duty on my part to spend some time in retail and/or hospital pharmacy, if only for one evening a week or a month during the summer time.

When I was in Lincoln, Nebraska, for the District meeting, I visited strictly professional stores, as well as the most modern self-service stores. This division into two extreme types of stores in the West shows a trend rapidly moving eastward.

I want it thoroughly understood that my comments must not be construed to mean that I favor a decrease in the number of full-time teachers and an increase of part-time teachers, but rather that there should be more thought given by pharmacy faculties to in-service training. This would apply equally to the teachers of Pharmacy, Pharmacology, Pharmacognosy, Chemistry or Administration. In my opinion this is a practical aspect which we cannot overlook. The teacher should know what happens behind the counter in the retail store whether it be the corner drug store, the professional type of store or the hospital pharmacy.

Pharmacists are men and women liked and respected in their communities. They have personality, good manners, and other human qualifications which are not studied in text books or listed in examinations. These are intangible things that can grow up in almost any course, however factual or specialized, in the classroom of fine teachers and in the every day friendliness of campus life.

Pharmacists must have ability to get along with people, to be honest, to do a sound piece of work, and to respect the good work of others, to be reflective, to understand more each day of things and people and the world around us.

Let us dedicate ourselves to the sound development of the highest standards and ideals of pharmaceutical education. When I say highest standards, I do not use idle words but express a fixed determination to attain as quickly as possible the highest educational standards in pharmacy.

Are we too prone to speak too much about pharmaceutical education and not enough about pharmacy? I do not believe so.

We know that pharmacists are facing constantly changing ideas; that some lack enthusiasm about their opportunities; that they do not always evaluate products. We also know that a new realism in educational techniques is little short of inspirational; and that a good teacher must know how to motivate.

Therefore we must strive for more ideal conditions; we must redouble our efforts to advance our profession. The vitality and health of our profession must be preserved if it is to render the benefits expected of it. Whether the actions needed to achieve this end are popular or not is secondary. We are judged by the quality of our products.

It requires more concentrated attention and effort on the part of the administrator, the teacher and the student to master the vastly expanding area, commensurate with the developments in therapeutics, the newer dosage forms, and the economic aspect.

Television, radio and visual aids all have had a tremendous effect on the education of our youth. Educators feel that one of the effects of television is that book resistance on the part of the student is fast becoming an important factor we must face in education. For instance, it is much easier to listen to some one else and to look at pictures than it is to ferret out information for one's self.

Pharmacy is a member of the health team and should make itself felt as such. We cannot do this by measuring all things on a dollar and cents basis. There should be no question when a physician asks for a definite item that he gets it. Stressing honesty and integrity must be a part of the fundamental training of the student.

Teachers in such a pattern are extremely important. We are dealing with youth and the impressions we make, in many cases, will be carried through life. Thus it goes without saying, our teachers should have the highest educational and moral standards.

We cannot afford to look backwards. We can only hope to move forward by setting a goal which is difficult to reach and working toward it, though it takes a year, two years, five years, or more.

Extended Program

We cannot afford to overlook the point that the majority of the pharmacists we train remain in retail pharmacy. Therefore, I think that our program should consider first of all, making this retail man

the best possible by giving him the finest training available. This is not a local problem but a national one.

Dr. Christensen said: "The educational system of a profession contributes to a large degree to the growth and advancement of that profession. The primary responsibility for growth and progress and improvement in the practice of pharmacy rests upon the member colleges of the association.

"It is true that to insure consistent progress in the practice of pharmacy each succeeding class of graduates should be a little more capable, each a little better educated and better trained than the preceding class. This can be brought about by a better selection of students, improvement in teacher quality, choice of subject matter and scope of subject matter." In this I concur.

I have found the following words of unknown origin thought-provoking and want to share them with you:

"A child is a person who is going to carry on what you have started. He is going to sit where you are sitting, and when you are gone, attend to those things which you think are important. You may adopt all the policies you please, but how they will be carried out depends on him. All your books are going to be judged, praised or condemned by him. So it might be well to pay him some attention." This could well apply to our students in pharmacy.

Pharmacy's perspective must change; whether this be a gradual process or a sudden one depends largely upon the situation and attitudes of the member colleges. Within five years it should be possible for all schools to embark upon an extended program, leading to a degree other than the B.S. which would include a definite division into a pre-pharmacy and professional course, or a pre-pharmacy course as a pre-requisite entrance into a pharmacy school. This should be an objective of the Association and should be accomplished.

Teachers' Seminar

The teachers' conference for 1954 should present as many facades as possible in order that the very best may be chosen, as only in this manner can we hope to advance. The preliminary report of the planning committee for the 1954 seminar states that, "The 1954 Seminar will unquestionably be more difficult to plan and successfully conduct than earlier seminars." Undoubtedly this is true,

but the recommendations are sound and merit consideration by the committee which will be appointed to conduct the seminar. I agree the entire seminar should be as practical as possible; however, there must be some philosophical treatment. I feel that the theme, "How to Teach and How to Teach More Effectively" is a very good one.

K. T. Keller, President of Chrysler Corporation, has said, "In this age of atomic energy and other wonders it is easier to glamorize achievement than to explain it or to understand it." So let me ask the question, "Have all factors been considered and measured?" For when the facts are known, all decisions rest finally on judgment and experience. With experience we can calculate many possible eventualities and with judgment we can lay a course which seems to have the best chance of success and the least chance of failure.

To summarize—I Believe That:

1. Pharmacy needs a definite public and professional relations program.
A brochure appealing to students is very essential.
2. In-service-training of teachers is an important adjunct in the training of the teacher.
3. The member colleges should alert themselves to the rightful place of pharmacy in the public health program.
4. The member colleges should alert themselves to answer the question which has often arisen—"What can the School of Pharmacy contribute to a Medical Center?"
5. An extended program is imperative.
6. The Pharmacy Seminar devoted to Teaching which will be held in 1954 should help solve many of our teaching problems.
7. The Pharmaceutical Survey has shown the way and it behooves all member colleges to correlate and integrate all of its constructive findings into a better pattern of pharmaceutical education.
8. All our problems in pharmaceutical education should be subjected to the four-way test of Rotary, which is:
 1. Is it the Truth?
 2. Is it fair to all concerned?
 3. Will it build good will and better friendships?
 4. Will it be beneficial to all concerned?

Recommendation—Whereas, I have been reliably informed that the American Association of Colleges for Teacher Education, the Association of American Medical Colleges and the Association of American Colleges each have committees which meet jointly with a

committee of the American College Public Relations Association to study the problems of public relations in their respective fields,

I, therefore, recommend that a public relations committee on pharmaceutical education be appointed. This committee is to consist of two or three members and the committee is to be instructed to request the American College Public Relations Association to nominate two or three members of their Association to meet as a joint committee to initiate a study of the public relations problem as it pertains to pharmaceutical education.

In conclusion, I desire to state that I have enjoyed immensely the privilege of meeting with the members of the Executive Committee. I have also derived a great deal of satisfaction in attending the district meetings to which I was assigned. This gave me a splendid opportunity to observe the thinking of the members of the profession in different parts of the country.

As your president, I shall endeavor to do everything in my power to promote the interests of the Association and of the field of Pharmacy. With your whole-hearted cooperation I am certain that this can be accomplished.

Recent Progress in Pharmaceutical Education

MELVIN W. GREEN

Director of Educational Relations, American Council on
Pharmaceutical Education

The character of pharmaceutical education is changing and changing rather rapidly. Many are disappointed that the rate of change is not more rapid and others are astounded that the rate is as great as it is. In a situation which is moving with such rapidity, it is sometimes difficult to assess the rate of movement. But I would like to report to you some measures of progress and trends in pharmaceutical education as I have seen them during this past academic year. In doing so, I hope that you will bear in mind that I have

seen only about one-third of the accredited colleges of pharmacy and that time and human frailty have limited the extent of observation.

There are several phases of pharmaceutical education which show distinct progress. Although I have not assayed our progress in such terms, the number of square feet of space available to our schools has been increased by the addition of new wings to old buildings, rearrangement of space and even by the erection of new buildings. A simple inventory would show an increase in equipment used for teaching and research, and more books and journals in our libraries. A count could be made of additions to our collective staffs and the number of these having Ph.D.s and other advanced degrees determined. A report of this type, impressive as it would be, is merely quantitative.

Beyond a certain point it is not physical plant that is important, but rather what goes on there. The possession of unused scientific equipment or equipment which is not used effectively in teaching or research is uneconomic. Books and journals mean little unless they are used systematically and frequently by staff and students alike. When I say that staffs should be weighed rather than counted, I hope that you will not think I am encouraging employment of obese teachers or plugging the sale of reducing drugs. My point is this, that while there must be certain minimal quantitative standards in these matters, the emphasis should be more qualitative. At the risk of giving impressionistic data, I would rather speak in such qualitative terms.

Let us turn, first, to the matter of curriculum. This is certainly the heart of pharmaceutical education. It was a source of great personal satisfaction to note that during the past year, practically every school visited was giving attention to curricular study. Stimulated by the publication of the Blauch-Webster report on THE PHARMACEUTICAL CURRICULUM, attendance at teachers' conferences (which, incidentally, were established primarily for teachers and not administrators), and the excellent advising of my predecessor, Dr. Deno, staffs have been restructuring their curricula and reevaluating their individual course syllabi. Much of such study is on a cooperative basis, the members of the staff sitting down together and planning their courses in light of the present conception of a pharmaceutical curriculum. In several instances such study has been broadened to include those teaching in the basic science areas, and in at

least one case, with the active assistance and advice of a member of the School of Education.

The word *curriculum* in Latin, so I have been told, means a race course. Apparently we have been well aware of that etymology, for curricula appear to have reflected a race between departments and individuals to see who could reach the student "firstest with the mostest". This leads to an amount of duplication in factual material that, frequently, is excessive and at the same time leaves great gaps of vital information about more modern pharmacy. Pharmaceutical education too often has reflected the *materia medica* of about 1910 when Harvard's famous physiologist, Henderson, said that it was probably true that a random patient with a random disease consulting a doctor chosen at random has better than a 50-50 chance of profiting from the encounter. Isn't it strange how much material is still in our syllabi which have been deleted from the official compendia over a decade ago. Perhaps this comes about by the use of heirloom lecture notes.

Let me illustrate this situation by some actual examples. In one school visited, the students in a course in pharmacy were making preparations involving oleic acid before they had had basic organic chemistry. The instructor took nearly 20 minutes to explain the properties of an unsaturated fatty acid. From the blank look on some of the faces, it would appear questionable whether the full implications of what was said were appreciated. This instructor never was able to find time to introduce modern wetting agents and other recent pharmaceutical adjuncts into the pharmacy syllabus at any point. A more proper arrangement of courses would have enabled modernization. Here is a case where group planning would have been helpful.

One college is responsible for an excellent example of such planning in the case of the vitamins. By common agreement, the subject matter was divided by use of a definite pattern. Pharmaceutical chemistry limited itself to all matters of structure, synthesis, and effect of functional groups on stability and solubility. All aspects of deficiency diseases in both animals and humans, bioassay, occurrence of vitamins in foodstuffs and evaluation of vitamin content of foods were taught by biochemistry. The pharmacologist gave only a brief lecture on toxicity, peculiar pharmacologic side-effects, and legitimate

uses apparently not dependent on actual deficiency. The pharmacognosist confined himself to the role of vitamins in plants themselves and the biosynthesis of vitamins. The pharmacy department restricted itself to such incompatibilities as the catalytic destruction of certain vitamins by the presence of metallic salts and other organic compounds, dangers of adsorbants used as excipients adsorbing and not subsequently releasing certain vitamins, and other formulation problems. In this fashion the student, ultimately, received all of the vital information on vitamins with a minimum of duplication.

While much and hopeful improvement in course and curriculum planning has taken place this year, much needs to be done. Some really vital and far reaching experiments are needed to bring education not only in conformity with the best present pharmaceutical practice, but in conformity with what we have a right to expect the practice of the future to be as well. We must never lose sight of the fact that the test of the quality of education of those who graduated in 1953, is not so much their ability to cope with pharmaceutical practice in 1953, but rather their ability to meet situations as they will exist in about 1973 when the students will have reached, essentially, the peaks of their careers.

Too often we are so busy teaching the tricks of the trade that we fail to teach the trade. Pharmaceutical education in the United States is an outgrowth of the apprenticeship system. As formal education increased, too often the magister assumed less responsibility for teaching the apprentice. Many in the schools have noted this trend and attempted to alleviate the situation by teaching "tricks" that cannot be taught effectively in the schools and are probably not of collegiate caliber. It is time that the colleges look more critically at their programs and separate vocational aspects that are best taught on the job from those best taught in the college. No great tragedy will ensue if the student graduates without the ability to wrap a package or print a show card, but it will be unfortunate if he graduates without proper foundation in those basic and professional sciences essential to the professional side of his career which cannot be learned effectively on the job.

The majority of our schools now have a 4-year curriculum, although 14 of them have a 1-3 pattern, that is—one year of pre-pharmacy is required before admittance to the school of pharmacy. This

pattern appears to be effective in screening out many of the poorest risks.

Thirteen of our schools now have a total program longer than 4 years either on a required or on an optional basis. These latter schools have 1-4, 2-3, and 2-4 programs. It is to be hoped that these schools will make detailed analyses of their programs public, since, no doubt, other institutions will be extending their programs in the near future. These schools in the vanguard will thus have accumulated a vast amount of information regarding the various patterns. For example, some of those schools with a 2-3 pattern are finding that some of the students entering pharmacy from other fields and other colleges have had organic chemistry while others have not, thus imposing a limitation on the level of instruction in the first professional year. Certainly this is one area where experimentation has been wise.

I wish to make certain observations on extended programs and the need for them. First of all, it is self-evident that even with the most ideally arranged 4-year program, it is not possible to plan adequate general education, sufficient solid fundamental sciences, economics and mathematics and the essential, applied, professional courses within the 4-year period. I believe everyone in this room who has had any educational experience acknowledges that. This is made doubly difficult in many institutions because of ROTC programs (in one school the ROTC takes out an entire day), courses in history and government required by the state, and courses in religion required by most denominational schools. These courses usually are given at the expense of other general education courses and often suffer the fate of required courses in terms of student ennui.

Without a pre-professional program, pharmacy is distinctly handicapped. Those who deal with the profession in its contact with other professions, with draft boards, and with government and welfare agencies discover that pharmacy often is not classed with other professions because of the lack of pre-professional education and the limited number of professional courses taken. In many universities, the central administration likewise tends to place pharmacy in a lower category because it is not based on adequate pre-professional education. The student is classified frequently with those who are graduates of business colleges, schools of music and the like or the

para-medical personnel such as occupational therapists and laboratory technicians. The pharmacy student is too rarely grouped with those of the major health sciences like medicine and dentistry because he is, in effect, apt to be little different from a liberal arts graduate with a science major.

In examining schools with programs based on pre-professional education, certain advantages seem obvious to me: the student demonstrates ability to handle college work for one or two years before he applies for admittance to pharmacy, he has a broader outlook and he is chronologically and intellectually more mature. This means that the professional courses can be, and generally are, placed on a higher plane than in the 4-year program. I am sure that you all have experienced the feeling that when students become seniors, they suddenly begin to sense what it is all about. That feeling arises because the student finally has enough background information and enough mental maturity that he can integrate his knowledge effectively. In extensive programs that advantage exists for 2 or 3 years rather than for only one.

Most colleges of pharmacy, today, have an increased number of students admitted from areas other than pharmacy. These students bring from one to several years of academic work to the field and possession of a degree in another field is not unusual. The experimentation encouraged by the Ford Foundation and others to challenge students at an earlier age will ultimately lead such young people into pharmacy with more general education, for it is a part of such plans to delay the student's entrance into the professional schools until he has had sufficient general education. The enforcement of the 3-year rule in such cases is not infrequently difficult to justify. To fail to challenge students with advanced standing is to lose some of the best potential leadership in the field.

Intimately tied to the curriculum, is personnel. Here, again, there has been definite improvement during the past few years both quantitatively and qualitatively. There are still colleges, however, without the equivalent of a full-time instructor in each of the areas of specialization. This is a situation which should be corrected very soon. As far as teaching load is concerned, one person can teach courses in both pharmacognosy and pharmacology, for example. This, however, divides his interests and responsibility and makes it

impossible, frequently, to develop specialized and elective courses and special problems courses or honors courses in one field or the other. As a result, one field suffers at the expense of the other or ultimately both fields are poorly taught because the instructor fails to keep strong in either.

While there is still a shortage of qualified instructors, especially in certain fields, the gap is closing and too often teachers cannot be hired, not because of shortage, but, because of salary structure, failures to provide adequate fringe benefits, lack of opportunity to grow professionally and lack of imaginative leadership on the part of older staff members and the dean. In some cases, bringing in someone educated in a related field would not only help eliminate the shortage but would prove to be a stimulus as well. Obviously, such a person must be chosen with great care.

Some indication of the qualitative improvement in staff may be gained by citing an example. Three years ago one institution did not have a single Ph.D. on the staff. They now have four. In such a school one can sense an immense difference in outlook. The problem now consists in keeping those young Ph.D.'s creative. They must be provided time, equipment, and the atmosphere for creative research and scholarly pursuit. How else can we progress?

A university has two functions: education and research. Yet the primary reason for its existence is not to convey mere facts to students nor provide research facilities for its staff. Books are cheap and readily available and we could return to the apprenticeship system. Research could be done more efficiently in institutions set apart for such a purpose. No, the real excuse for a university is that it brings together the older and experienced with the young and provides an imaginative consideration of learning as well as preserves the connection between knowledge and the zest for life. As Mr. Whitehead, the philosopher, would say, a university which does not impart information imaginatively has no right to exist. With the imaginative treatment "a fact is no longer a fact; it is invested with all of its possibilities. Fools act on imagination without knowledge; pedants act on knowledge without imagination. The task of a university is to weld together imagination and experience."

Deans: do you want your teachers to be imaginative? Then encourage them in research and scholarly pursuits. Do you want the

researchers to be imaginative? Then bring them into the classroom with imaginative young folk. Again quoting Mr. Whitehead, "For successful education there must always be a certain freshness in the knowledge dealt with. It must either be new in itself or it must be invested with some novelty of application to the new world of new times. Knowledge does not keep any better than fish. You may be dealing with knowledge of the old species, with some old truth; but somehow or other it must come to the students, as it were, just drawn out of the sea and with the freshness of its immediate importance."

The apparent dichotomy which appears to exist between teaching and research exists primarily because the process of learning is really a trichotomy, although it is not always recognized as such. There are really three processes involved in teaching: research, scholarship and communication. Research must be separated from scholarship since research is the effort to discover new facts or to recover lost or forgotten facts, while scholarship is the organization, criticism and interpretation of facts and concepts. In the words of Professor Cowley of Stanford University "the identification of these three processes leads directly to the recognition of the fact that each of them depends upon the other: that without research, scholarship degenerates into fatuous verbalism; that without scholarship, research decays into a mere collection of elaborate trivia; that without both research and scholarship, teaching becomes bromidic prattling."

In my most frequently recurring nightmares, I see a gargantuan classroom holding perhaps 5000 students all laboriously scribbling, as if their lives depended upon it, the words of questionable wisdom from the pages of standard textbooks. Such performances which are not uncommon certainly detract from the learning process.

This lack of imaginative presentation is serious and is taking its toll among the students. If you doubt this, ask the students how stimulating the student-teacher contact is.

The proper use of visual aids may improve this contact. In one school visited, several pieces of visual aid equipment have been purchased recently and the librarian, who is also well-trained in visual education, holds frequent conferences with the staff on the use of

such tools. It is important to know how to use such equipment properly or the purpose may be defeated. Of equal importance is the choice of subject matter to receive such treatment. It is not amiss to point out that trivia may be passed through balopticons, Vu-graphs, wire recorders, movie projectors and television sets, but they always emerge as trivia.

While imaginative instruction is essential, the close supervision, particularly of beginning students, is likewise important. Too often one sees the use of incorrect tools, like large spatulas to transfer minute quantities, or large graduates to measure small volumes of liquids. Patient and persistent supervision is required here, preferably in small groups. It is hardly for me to say where the balance between supervised training and imaginative teaching should lie, but I believe you will agree with me that the equilibrium point should be nearer the stimulating area. I wish that time would permit more discussion of these points.

The students comprise a third and important group of the student-staff-curriculum relationship. An examination into the records of admissions of most colleges discloses no admissions of glaringly poor students. Without ever having made a complete analysis of colleges visited, I believe it is safe to say that at least 70 per cent of those admitted were in the upper four-fifths of their high school class. In short, our students are average. However, I am of the opinion that our curriculum, when taught in an imaginative manner, is sufficiently difficult that just average students are not up to it. The Remmers-Gage studies showed that our students have an ability and understanding equivalent to average liberal arts students. In a professional school, this level is not sufficiently high in my judgment.

While it is true that we have few poor students in our colleges, it is also true that we have few really good ones. Students with creative ability are conspicuous, if not by their absence, at least by their scarcity. This mediocrity frequently carries over into the graduate area as well. Those of you who have graduate programs, look at the records of your students and you will find that too many have only a few tenths of a grade point more than enough to satisfy minimal requirements for admittance to graduate school. Look at their performance in graduate school and you will find, too often, that in the more challenging courses in which they are in competition with

graduate students in other fields, they have barely made a B or have rated only a C. This situation, too, has portent for our future.

The figures on admissions to professional schools prepared by Mr. Guthrie of Ohio State University tell us that in pharmacy, no significant number of qualified applicants fail to be admitted to a school of pharmacy. In some geographic areas, high ratios of acceptances to applicants exist. These ratios are probably misleading, however, due to multiple-applications. In the words of Mr. Guthrie "Out of 70 Pharmacy Schools, 63 reported 7,600 applications for 4,592 places in their classes, a ratio of applications to admissions of 1.6 to 1. For 1951 the ratio was almost the same, but in 1948 it was 4.0 to 1. Forty-four deans indicated they were able to admit all applicants who met their requirements, twenty answered that they could not, and three deans did not answer. Only twelve schools had as many as two or three applications for each place in the entering class for 1952, and four of these schools are located in New York City."

The remedy for this situation lies not only in better recruitment programs, but in programs designed to reach more of the creative group.

It is of interest that one college has developed its own motion picture and sound-film strip about pharmacy as a profession for use in recruitment and public relations. This type of program should be encouraged.

There is an increased interest in aptitude testing and other kinds of predictive testing. Unless such devices can be used as screening devices and unless the results are made use of throughout the educational program, they are almost a waste of time. It is well to remember, also, that while such tests can be useful in screening out poor professional material, they cannot screen good ones in, that is, a good student can be found by such devices only if he is there in the first place.

In summary, a sound program of pharmaceutical education is composed of many phases, only a few of which have been touched upon here. These phases are all important and should be developed as completely and uniformly as possible by every college in relation to the type of institution it is and its clientele. Each institution should define carefully its objectives and set a definite goal for itself in relation to one or more of these facets each year so as to insure

progress.

I can think of no more fitting way to close this report than to quote the words of John M. Russell, Executive Director of the John and Mary R. Markle Foundation as spoken before the Association of American Medical Colleges, some 5 years ago. In quoting I have taken the liberty of substituting "pharmaceutical" for "medical" and "pharmacists" for "doctors".

"It has often been said that universities, and the professional schools that form them, are the best judges of their own educational activities . . . you—the pharmacy deans—are the best judges of your own activities. With this, I fully agree . . . It is because of this conviction that I ask, 'What do YOU propose to do about pharmaceutical education?'

"To retain independence is not easy. To be independent requires vision—and ability to see ahead and to plan for the needs of the future; it requires the same intense interest and belief in the value of experimentation and development in pharmaceutical education that you show in your scientific laboratories; and it requires a full understanding of what pharmaceutical education is and its place in training pharmacists for the future of this country—not for the past.

"So . . . I am suggesting: first, that the pharmacy deans assume the leadership in pharmaceutical education and hence in the profession; and, second, that you work out your problems as educators together through the services of this Association. If you don't assume full control of pharmaceutical education, others will."

An article entitled "**Pharmaceutical Education**" by Drs. Glenn Son-nedecker and George Urdang appeared as the leading article in the February issue of **Higher Education**, the semimonthly publication of the Federal Security Agency of which Dr. Lloyd E. Blauch is editor. This publication goes to college administrators, to education libraries and the like. This distribution makes possible the presentation of the problems of pharmaceutical education to an area not often reached by pharmacy. We are grateful to the authors and to Dr. Blauch for this publicity. The article follows the pattern of a series of articles on education in the various professions being published in **Higher Education**. The U. S. Office of Education has supplied the authors with extra copies of this issue which may be obtained by addressing the American Institute of the History of Pharmacy at the University of Wisconsin at Madison.—Ed.

The Role of the Pharmacist in Civil Defense*

WILLIAM W. STILES, M.D.

School of Public Health, University of California

Honorable President, Mr. President-elect, Members of the American Association of Colleges of Pharmacy, and distinguished guests: It is indeed an honor to be invited to address you on the subject of "The Role of the Pharmacist in Civil Defense". I accept your invitation with pleasure. The pleasure is increased by my place on your program, following the address of Dr. Reif in which he emphasizes the need for improvement in public relations and public health.

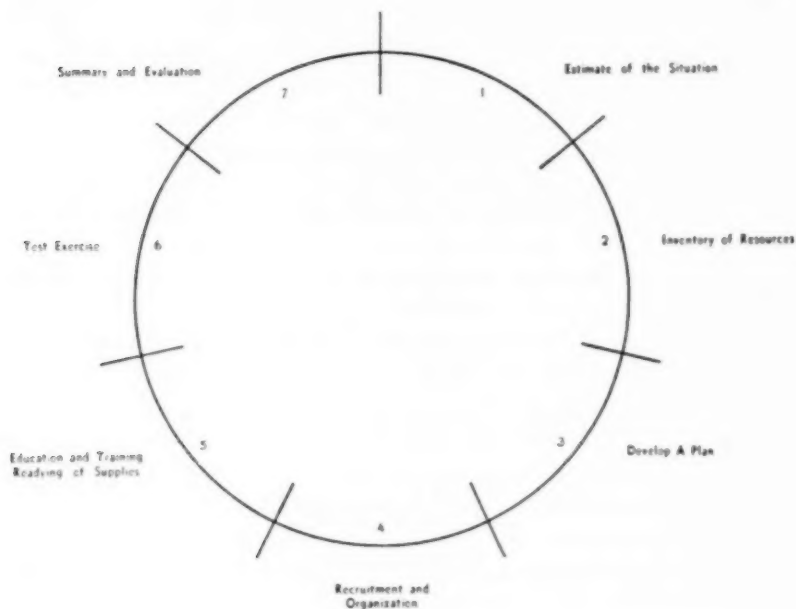
We have gathered here to celebrate the 54th Annual Meeting of your Association and decades of progress in the field of pharmacy. Being troubled times, it is particularly important that we meet now to discuss the future of your profession and the means by which we can educate and train future professional workers. Because of the accent on war and great natural disasters, it is especially appropriate to discuss the role of the pharmacist in civil defense. I am glad that we have the opportunity to talk over this subject in Salt Lake City because we are on the home ground of many who have made valuable contributions to all phases of civil defense. A particularly outstanding job has been done by Dr. George Spendlove and his staff in the State Health Department—by President A. Ray Olpin and his staff at the University of Utah—and by Dean David Hiner, Dr. Ewart Swinyard and others of the College of Pharmacy.

Before attempting to define the role of the pharmacist in civil defense, it is necessary to take a look at the entire program of civil defense. This program, like all programs, may be divided into at

*This address was given at a general session of the A.A.C.P. on August 17, 1953 in Salt Lake City.

Dr. Stiles is Associate Professor of Public Health at the University of California and is Medical Director of Region No. 7 of the Federal Civil Defense Administration.

least seven different phases. These may be illustrated by segments of a circle :



1. The first of these segments is a definition of the problem itself. In the Army they call this making an "estimate of the situation".

2. The second is that of inventorying the material and personnel resources to see what you have to work with in solving the problem.

3. The third is that of drawing up a paper plan to see just how these material and personnel resources can be used in the solution of the problem.

4. The fourth is that of recruiting and organizing personnel, and the purchasing of additional supplies that may be necessary to follow your plan.

5. The fifth is that of educating and training the personnel, and that of readying the supplies for use.

6. The sixth is that of trying out this plan by a CPX or a dry run which is the equivalent of actual operations.

7. The seventh is that of summarizing your accomplishments, then evaluating them, doing research on the unsolved problems that have arisen, and then starting all over.

I. Estimate of the Situation

The threat of an enemy attack on the continental United States is still very real. Although the war in Korea has been temporarily stifled by a military truce, we are all aware that this is not going to stop the aggression of communism. It is well known that Russia now has more than 100 atomic bombs and the necessary air strength to deliver them to as many cities in this country. According to recent announcements, the Russians also have the hydrogen bomb, a bomb that has the equivalent power of five million tons of TNT. Even with our present military defenses, it must be admitted that 70 per cent of these bombs could be delivered to their targets. Presumably, enemy aggression would take the form of a surprise attack, resulting in a tremendous number of casualties within a matter of hours. Undoubtedly, an atomic strike could be preceded, accompanied or followed by the use of conventional high explosives, incendiaries, sabotage and possibly chemical and biological warfare agents. It has been conservatively estimated that such action would immediately cause at least eleven million casualties in this country, with 5 $\frac{1}{2}$ million of these terminating fatally.

Even if the present conflict is limited to Korea and the truce remains in force, this Nation is still committed to maintain a sizable army. Thus, a high percentage of our graduating students are destined for military service. So, while we are primarily considering our defensive position, we must also give some thought to our offensive military program.

And all the time—in war and in peace—there is the threat of natural disasters. Such disasters are well known to you because they make the headlines, but meanwhile, there is a succession of minor acts of violence which hardly seem newsworthy. They may involve only one or a few persons at a given time, but in the aggregate, they affect more people than all the wars in history. These "little" accidents kill nearly 100,000 persons annually and maim 10 million more. In the last half century, the automobile alone has taken a toll of a million American lives—twice the number that have been lost in the Civil War, the Spanish-American War, World War I, and World War II combined. At the present rate, the average citizen in this country has one chance in 1400 of being killed by an accident within a given year. He has one chance in seven of ultimately meeting this

fate. Such prospects are not apt to change materially unless something drastic is done, for in the last half century all of our efforts to prevent accidents have reduced the death rate from them by only 12 per cent. You can already see that our pharmacists have an important role to play in both defensive and offensive military operations, and also in combating the effects of both natural disasters and ordinary accidents.

II. Inventory of Resources

An analysis of our present medical and health resources reveals a marked deficit in trained personnel to cope with any sort of a major disaster. In an atomic strike, at least seven times the number of existing skilled workers are needed to render services considered to be the minimum in terms of humane treatment and care. As you all know, a respectable portion of our professionally trained personnel are pharmacists. They number approximately 100,000—almost half the number of physicians in active practice. All of these pharmacists are desperately needed in our program for civil defense. Moreover, there is a desperate need for all our Colleges of Pharmacy to prepare future pharmacists to share in this burden of disaster preparedness. Present and future pharmacists are of vital importance to us for a special reason . . . they are overseers of practically all our material possessions in the field of medicine and health.

III. Develop a Plan

In the United States, a nation-wide plan for civil defense was not seriously considered until 1946 when General Bull proposed such an organization. His proposal was then studied carefully by a committee under the direction of the late Russell J. Hopley. Based upon their recommendations, the present plan for civil defense came into being by executive order in January 1951. The Federal Civil Defense Administration was created for over-all guidance and advice to the states, but in the plan each of the states was to reserve a great deal of autonomy in the creation and operation of their own program. A degree of autonomy was also reserved for the county and local governments. The exercising of this autonomy may explain why there is some confusion in the details of the program at each echelon of administrative control.

In general, however, there are 12 specialized services recognized in civil defense:

- | | |
|-------------------------------------|--------------------------------|
| 1. Health & Special Weapons Defense | 7. Engineering |
| 2. Welfare & Evacuation | 8. Supplies |
| 3. Fire | 9. Warden |
| 4. Law Enforcement | 10. Facilities Self-protection |
| 5. Communications | 11. Training and Education |
| 6. Transportation | 12. Public Information |

These various services have been described in some detail by the Federal Civil Defense Administration in their publication, "United State Civil Defense".

In the field of Health and Special Weapons Defense, FCDA has published this authoritative booklet, AG-11-1. (Show copy). In it the function of the following facilities are described:

1. Existing and improvised hospitals, first-aid stations and an ambulance service.
2. Public health agencies, which include the mortuary services and the maintenance of vital records.
3. Agencies for defense against special weapons, including atomic warfare, biological warfare and chemical warfare agents.
4. Facilities for the procurement, warehousing and distribution of medical supplies.

In the plan, pharmacists, like everyone else, may have to serve in any capacity during the early phase of a major disaster. Later it may be possible to concentrate their activity on the logical service to which they belong—namely health and special weapons. Still later, as some order comes out of the chaos, the function of pharmacists may become still more specialized, although they may still be concerned with any of the following:

1. Emergency care in existing and improvised hospitals and first-aid stations.
2. Emergency sanitation, vital records and mortuary services.
3. Special weapons defense including the detection and decontamination of atomic warfare agents, biological warfare agents and chemical warfare agents. The Pharmacist would be especially valuable in the latter because of his special skills in the field of chemistry.
4. Medical supplies.

During the phase of rehabilitation from a major disaster, the pharmacist may practice his specialty in a manner similar to the way he now practices in his own community.

IV. Recruitment & Organization of Personnel, Procurement of Supplies

In developing a program for civil defense, all pharmacists should not be recruited and organized at one time. If this is attempted, one will soon discover that he has more people on hand than he knows what to do with. It is much better to develop the cadre system—and to ultimately extend these so that everyone is involved. Of course, the purchase of supplies will depend largely upon the calculated needs and the funds that are made available. At the moment huge sums have been provided by the federal government for the stockpiling of medical supplies. So far, these funds have amounted to about 107 million dollars. These funds, in turn, have been matched by state and local governments. So you can see we really have quite a lot of material on hand. We still need a lot more.

V. Education and Training of Personnel; Readyng of Supplies

One of the big supply problems of the moment is that of unitizing these medical and health supplies so that they are in a usable form. Once this is accomplished, the supplies must be dispersed widely so that they are immediately available to the teams that may need them.

Now, let's consider the education and training of pharmacists. This is the problem of greatest concern to all of you. Of course, you yourselves are in the best position to ascertain the deficiencies in your education and training program. I would like to suggest, however, that you make a critical study of your existing curricula to see if it includes all aspects of civil defense. It is best to include topics relating to civil defense into existing courses rather than to create a separate course because it is logical to integrate and coordinate the activities of abnormal times with those of so-called normal times. A practical means of such integration was demonstrated at the Army Medical School during the last war. There they developed examination questions which embraced the important points to be covered and then distributed these examination questions to those concerned with the various departments so that they might be incorporated in their course of instruction in some logical way.

Civil defense should not be made an extra burden for the students. It probably will be if such instruction is given as a separate

course at the noon hour, in the evening or the weekend. This way you can be sure that the students will not only hate you, but they will also hate your subject. Students should receive proper credit and recognition for their accomplishments in the field of civil defense just as they do in every other part of the curriculum. Your instruction should be realistic, and all of the members of your faculty should participate in it.

In considering the specific topics to be included in your courses of instruction, it is essential to give thought to the subject of self-preservation and of mutual aid. Everyone should learn not only the elements of first aid but also the elements of rescue, fire fighting, law enforcement, communications, transportation, supply, and welfare services. These things may be as important as first aid in the event of a major disaster.

While considering first aid, do not think of the subject as "what to do until the doctor comes", but consider it, "what to do if the doctor does not come for several days". This, then, is really a consideration of emergency medical treatment. One must also give serious thought to the limitations that must be placed on such procedures in normal times else he may find himself guilty of illegal medical practice. In the event of a major disaster, however, non-licensed persons may have to practice medicine. They may need to know a lot more than the material covered in the standard Red Cross course. They may need to know the technique of venipuncture and the use of blood, blood derivatives and blood substitutes in the treatment of casualties. They may be required to give anesthetics; they may have to suture soft tissues. They will certainly need to know a lot about the prevention and treatment of wound infections and the handling of all sorts of casualties. Finally, consideration should be given to the preventive aspects of accidents and violence.

Many of the details of an educational and training program have been worked out by one of your committees under the chairmanship of Dean James Kidder. I commend the members of this committee and their work, and recommend their findings to you.

VI. Test Exercises

If this whole subject of civil defense is going to be alive to pharmacists and pharmacy students, they must participate in local civil defense activities. As I have said, it would be unwise for everyone to

sign up at the same time, but ultimately, it is imperative that everyone gets into the act. All of our professional people, including our pharmacists, should participate in test exercises, and in every instance they should act as if the test were the real thing.

VII. Summary and Evaluation

Summarizing and evaluating your progress is very necessary. How often this should be done in a formal way might be open to question, but I would suggest that it be done at least once a year. Having discussed your accomplishments and shortcomings, you may realize the areas in this program which need to be restudied and developed. Research of this kind is just as necessary in civil defense as it is in any other enterprise.

Conclusions

Undoubtedly, you all recognize that much of what I have had to say about the role of the pharmacist in civil defense is equally appropriate to all health profession workers. In fact, much of it is applicable to all good citizens. I know that you wanted me to tell you that the pharmacist's role in civil defense was an even greater specialization of his technical skills, but the truth of the matter is that he must reverse himself and become a jack-of-all-trades. The greater the disaster, the more primitive everything becomes. There is less use for the specialist who can do only one thing and a greater need for the jack-of-all-trades.

In a disaster, the degree of versatility amongst civilian workers must be even greater than that of military personnel—for civil defense workers can never be as well organized and disciplined as the military.

Well, where do we begin? I suggest that you jump into the act and start going around the circle. Begin with an estimate of the situation—go through each phase of the program. Don't stop with this phase of education and training which is your principle interest, but complete the cycle and then keep going.

During the rest of this week as you consider various aspects of the pharmacy curriculum, please give some thought to the question of how you can integrate civil defense into your program so that it is truly a way of life. You may then be sure that we will not only be better prepared in case of accidents and disasters, but that we will actually reduce the incidence of violence.

Summary and Evaluation of the Seminar on Pharmacognosy

By LLOYD E. BLAUCH

Chief for Education in the Health Professions
Office of Education
Department of Health, Education, and Welfare

Much could be said by way of summarizing and evaluating the seminar now coming to a close. The limits of time make it necessary to be brief.

The Environment

Before referring to the programs of the seminars I want to comment on two matters. First, I refer to the circumstances of our subsistence while here. The living arrangements made for a fine fellowship. Seldom have I seen a large group that seemed so compatible and happy in their association. The cafeteria arrangement which kept us together during the day was particularly appreciated. It helped to keep the sessions on schedule. The quarters for the meeting were commodious, comfortable, and well organized. We have been well served by the University and those who were responsible for the arrangements. The weather appeared to have been especially tailored for us.

Second, I want to say that our general education has been materially increased and improved by our week in the country of the Utes. Many of us had acquired strange ideas about this land and its people. As a result of our stay here we have had to revise most of our ideas about what John Gunther called "the particularity of Utah among American states." On a number of occasions during the week we have been regaled with the lore of the people, particularly the pioneers; we have looked over the plains, the mountains, and the canyons; and we have noted the remarkable physical and cultural accomplishments of folks who here built beautiful cities and institutions, laid down splendid highways, and made the desert bloom as a rose. We have been profoundly impressed by all these things. The talks we have had from time to time concerning this part of the world, and particularly Dr. Kirkpatrick's interesting and informa-

tive address on "Gathering Books and Herbs for the Saints," have been greatly enjoyed and deeply appreciated by all of us. I know of no other place where our general education would have preceded so rapidly or so extensively as here. One must, of course, except Texas and California; they would have it that way!

So much by way of introduction. Let us look at the seminar.

A Grass-roots Approach

This seminar is in line with a great American tradition. Our plan of government, to a very large extent, leaves educational matters to the people—to the citizens. Thus, largely through voluntary effort, we work together for our social improvement. Here we are, some 80 of us gathered from 38 states, I believe. And we are very happy to note that four of our Canadian brethren have also joined us in this voluntary endeavor to improve our and their professional service.

Your chairman in his introduction to the seminar aptly referred to this meeting as a venture in self-evaluation. He expressed the hope that from it we would obtain "a clearer concept of the subject and the place it fills in the pharmaceutical curricula," and he thought "that pharmacognosists will emerge from this seminar an inspired and cooperative group of educators." These statements reflect the grass-roots approach to your problem and at the same time suggest the objective of this endeavor.

The Program of the Seminar

In my judgment the program for the seminar was well conceived and outlined. It provided logically for consideration of: (1) the objectives of instruction in pharmacognosy, (2) prerequisite and corequisite courses, (3) teaching methods with special attention to laboratory work and the use of audio-visual aids and laboratory instruments, (4) special offerings in the field of pharmacognosy, (5) correlation with other subjects, and (6) graduate instruction.

The papers and discussions presented numerous points of view on the various topics but perhaps not always as clearly and sharply as might have been desired. I fear that at times we have let our spirit of friendliness and good will deter us from speaking out as freely as the occasion warranted. Nevertheless there was spread before us a great wealth of ideas about the matter under considera-

tion. We have been exposed to the thinking of many minds, some of them leading and creative minds.

From the papers and discussions we have come to know one another better in a professional way. Also we have come to a greater understanding of the problems and difficulties which confront those who are devoting themselves to the teaching of pharmacognosy. I am certain that, as a result, we shall see greater professional cooperation among us as we carry on our work during the next few years.

One of the results of this seminar will be a body of good literature on teaching. Many of the papers were good, some were excellent. I am glad to note that they are to be published and thus made available for future use. However, I have one regret. No record was made of the discussions, which means that they are lost except as we individually remember them. I do not think that the cost of verbatim stenographic reports would have been warranted, but I do wish that there could have been recorded the principal ideas which were brought out by the discussions.

Let us now consider the various main parts of the program.

Objectives of Instruction

Monday was devoted largely to the objectives of instruction. The papers and the discussions revealed the prevailing confusion in the teaching of pharmacognosy. Here, it seems to me, lies your greatest and most immediate problem, which is: How can you, working together, arrive at some rational agreement as to the functions and purposes to be served by your field of instruction? Until you have resolved this problem you will find it difficult to select from the great wealth of available materials of instruction those that should be used. Moreover, until the functions and purposes of the course are clear, you will have difficulty in determining the principles around which the materials can best be organized. Without such principles your courses are likely to be encyclopedic collections or conglomerates of facts and ideas rather than unified courses aimed at accomplishing sound educational objectives.

Relationships of Pharmacognosy

The programs on Tuesday and the first part of Friday forenoon were given to consideration of the relationships of pharmacognosy to

other courses. The papers brought out the fact that pharmacognosy is not an isolated subject. Certain prerequisite courses form an essential foundation for understanding the subject, and the course itself provides a fund of knowledge that is essential to later courses. Thus it becomes a link in a well arranged sequence beginning with biology and chemistry and leading up to pharmacology and dispensing. The position of pharmacognosy in the curriculum would then appear to be clear; ideally it should be preceded by courses in biology, microbiology, physiology, organic chemistry, and biochemistry; it should precede pharmacology and dispensing pharmacy. This understanding is, in my opinion, a great gain.

If these conclusions are sound we may see in them certain implications. The course in pharmacognosy may well be the first course in the curriculum that concentrates on drugs as entities. It draws from the physical and biological sciences relevant facts and principles and correlates and applies them to drugs of biological origin in order to gain an understanding of their sources, physical and chemical properties, and the methods by which they are processed for pharmaceutical and medicinal use. This seems to me to be a sound conception of the subject in pharmaceutical education. I would warn you, however, that if you accept it, it will put you on your mettle. Only teachers who are well grounded in the physical and biological sciences can handle the subject if that conception is to prevail.

Teaching Methods

Teaching methods and procedures received special attention on Wednesday and on Thursday forenoon. A number of you have felt that not enough time was given to teaching procedures; that too much time went into other aspects of pharmaceutical education. I believe there is some justification for that feeling, but I would remind you that the seminar next year is to be devoted entirely to teaching methods.

First, we listened to two papers which dealt with the more general aspects and phases of teaching. Then we heard three papers on orientation of students which suggested how a favorable student attitude can be developed toward pharmacognosy. The proper orientation of students is necessary in all courses of the curriculum, and

particularly in pharmacognosy—a subject whose significance for modern pharmaceutical education is not always apparent to them.

The examples of didactic instruction in the afternoon fell somewhat short of what was apparently expected, largely, I suspect, because not everyone who participated in the program seemed to know just what was desired of him. Nevertheless the papers and discussions showed some striking contrasts and proved quite profitable.

The papers on laboratory instruction reflected various conceptions of the purposes of such work. One of these papers presented a good rationalization of the author's laboratory work. Another paper gave an excellent specific example of how the laboratory work is carried on. These papers suggest several leading questions such as: How much laboratory work is necessary? How does an instructor determine the laboratory exercises to be used? How can the laboratory work be used to stimulate thinking rather than merely memorizing? The pointed paper on physical requirements for a modern pharmacognosy laboratory, through a well stated introduction, indicated the character of laboratory work that is needed today and then outlined the facilities that should be available for such work.

Special Offerings

The scholarly papers on special offerings in the field of pharmacognosy pose a difficult problem: whether such offerings should be taught in separate courses or as topics in a comprehensive course in pharmacognosy. There is considerable objection to organizing new short courses as new knowledge becomes available; such a process fails to revitalize the established courses with new topics and points of view. In general it would appear advisable, from the point of view of economy in time and learning, to provide comprehensive courses and to incorporate in them from time to time new materials that are pertinent. The study of antibiotics may be a special case as is also the study of pesticides.

Graduate Education

Lastly, we had a fruitful consideration of graduate study of pharmacognosy. Graduate education is of special importance in pharmacognosy because it is the means of preparing teachers. As I see it, you have two great problems. I have referred to one of these, which is to develop a clear understanding as to what functions and purposes your subject shall serve in modern pharmaceu-

tical education. The other of these problems is to prepare enough teachers who are competent to teach the subject in accordance with the views expressed in the seminar. I am under the impression that all too many teachers of pharmacognosy have not had the preparation that would enable them to teach courses in pharmacognosy that are adequate for our times. Coupled with adequate scholarship on the part of a teacher there needs to be a genuine enthusiasm for pharmacognosy. In my opinion, Dean Hiner's emphasis on this point was both appropriate and opportune.

In Conclusion

Such are some of the impressions which the seminar has made upon me. If I have omitted much that was significant to you, I trust you will charge the omission to a lack of time for a longer review and to my lack of technical knowledge of your subject; if I have placed too great value on some aspects of the seminar, you will use your own judgment about them; if I have been over-critical, I hope you will forgive me for it.

I am sure you share with me a feeling of gratitude to those who organized and managed the seminar so well, to the American Foundation for Pharmaceutical Education which supported it, and to the essayists who prepared and presented to us a feast of ideas which we have greatly enjoyed. Let me conclude by saying that, in my judgment, the seminar has been a marked success. We have, I am sure, obtained a clearer concept of pharmacognosy and the place it should have in the pharmaceutical curriculum. And I believe we must agree that it was good for us to have been here.

Suggestions Concerning the Teaching of Pharmacognosy

You will remember that on Monday the chairman of the Seminar Committee, Dean Hiner, appointed a committee to prepare and present to the seminar a statement on pharmacognosy. It consisted of Dr. Richard A. Deno, Dr. Willis R. Brewer, and myself. I am asking Dr. Deno to read the statement which we prepared. The suggestions follow.

Your committee, appointed by the chairman of the Seminar Committee, has considered a number of matters concerning the teaching of pharmacognosy and it now makes the following suggestions:

(The Seminar adopted these suggestions in principle as a guide for the teaching of pharmacognosy, and subsequently they were approved in the general meeting of the AACP.—Editor's note.)

1. That pharmacognosy be considered as the applied pharmaceutical science which deals with the biological, biochemical, and economic features of natural drugs and their constituents; that the dynamic phases, which are physiological and biochemical in nature, should be emphasized in teaching the subject.

2. That the student of pharmacognosy should have previously had substantial courses in biology (or both botany and zoology) and organic chemistry; that substantial courses in biochemistry and microbiology should be prerequisite or corequisite courses.

3. That the course in pharmacognosy be placed in the curriculum after the basic science courses that are prerequisite to it but before the courses in pharmacology and dispensing; that (a) in the current 4 year curriculum the logical position is in the third year, (b) in a 2-3 plan the preferred position is in the second year of the professional curriculum, (c) in a 1-4 plan the preferred position is in the third year of the professional curriculum, and (d) in a 2-4 plan the logical position is in the second year of the professional curriculum.

4. That, unless required separate courses in such important contemporary subjects as antibiotics, biological products, allergens, and pesticides are offered, introductory discussions of these subjects be included in the general course or courses in pharmacognosy.

5. That the course or courses in pharmacognosy include a substantial amount of laboratory study with exercises designed to illustrate the biochemical and physiological features of drugs as well as such ancillary topics as may be feasible for accomplishing the objectives of the course or courses.

6. That the course or courses in pharmacognosy carry 8 semester or 12 quarter hours of credit, which would usually require 64 or 96 clock hours of didactic instruction and 192 or 96 hours devoted to laboratory exercises and field work.

7. That the Committee on Curriculum of the American Association of Colleges of Pharmacy make a special study of undergraduate instruction in pharmacognosy, perhaps with the assistance of a special subcommittee consisting of teachers of pharmacognosy. Such a study might well run over a period of several years with occasional progress reports, and it could properly attempt to develop a better understanding of the functions, character, and scope of pharmacognosy as a subject in the undergraduate curriculum than exists at present.

8. That graduate programs for the preparation of teachers of pharmacognosy include substantial and advanced instruction in chemistry, microbiology, physiology, and pharmacology, as well as advanced work in pharmacognosy, and that such programs also provide some instruction and, if possible, practical experience in the teaching of pharmacognosy.

RICHARD A. DENO

WILLIS R. BREWER

LLOYD E. BLAUCH, *Chairman*

Scientific Research from the Viewpoint of the Afterdinner Speaker*

ERNEST LITTLE

Rutgers University, College of Pharmacy

Although I approach my responsibility to-night with a profound feeling of inadequacy, I am nevertheless pleased and feel highly honored to be your guest speaker on this important occasion.

I am pleased because your invitation shows an absence of the extreme caution which is sometimes thought of, erroneously of course, as being characteristic of the Vermont attitude. I think you will agree that inviting a man from down-city-way to speak on an occasion such as this involves at least a calculated risk—I shall try to make it fall within rather than outside of that category.

These early spring days constitute an unusually busy time of the year, as you well know.

This is the fourth address of this nature that I have been called upon to make in the past three weeks. I must confess, however, that I did not devote as much time to those other talks as I have this one. As is my custom, I spoke from notes, which is not always the complimentary thing to do.

Considering these facts, I was tempted to write Dr. Donald Johnstone thanking him for his invitation, and present adequate reasons why it must be regretfully refused.

Then the deterring factor presented itself. It is, at times, an annoying circumstance to have even a small residue of fair play in your makeup. I recalled how two years ago this spring, when I was President of the Rutgers Chapter of Sigma Xi, your Professor Paul Moody came to New Brunswick and gave us a most excellent presentation of some aspects of his research at one of our scientific meetings.

It seemed impossible to refuse, and so here I am. If my appearance proves unfortunate, do not place the blame on me or Dr. Johnstone but on your own Professor Moody. He, more than anyone else, is innocently responsible for my being here.

Dr. Johnstone pointed out to me that this talk would follow your initiation banquet and might very properly be somewhat differ-

*Presented before the University of Vermont Chapter of Sigma Xi at the 1953 initiation banquet.

ent from those presented at your regular scientific meeting. He indicated that any one of a variety of talks might prove appropriate and that a discussion of research in its broader aspects would be very much in order.

It certainly is unnecessary for me to take any time whatsoever to justify scientific research before this group.

We all recognize the extreme need of keeping our reservoir of knowledge filled, filled to overflowing with new facts, new knowledge which can be drawn upon to make a happier and more satisfying future. If this is not done, our reservoir of knowledge will run dry, as would a tank of water constantly drawn upon and not replenished, but it will soon become inactive, stagnant and inadequate.

Stagnation is something which needs to be constantly guarded against by even the most alert and progressive people. The line of separation between satisfaction with past accomplishments, maintaining the status quo—call it what you will—the line of separation between these things and stagnation is very fine and indefinite.

A primary characteristic of an effective research worker should be an adequate appreciation of, but not too great, satisfaction with all that has gone before. He should respect the past and make full use of it, but equally essential, he should look to the future with unbounded enthusiasm.

I believe you agree with me when I say that we should not hesitate to add to our fund of knowledge results of research which at the moment seem entirely impractical.

It is pure research which makes applied research possible, or at least amplifies and broadens its field of activity and its potentialities.

Perhaps I can best illustrate my point by an example. Years ago I was in Professor Arthur Thomas' office at Columbia University when Professor Donnan paid him a visit.

Professor Thomas pointed out, with great appreciation, many practical applications he was making in the field of leather chemistry of what is now known as the Donnan Equilibrium. Professor Donnan remembered, somewhat vaguely, the publication to which Dr. Thomas referred. He expressed appreciation and some surprise that it had such valuable practical applications.

As soon as we restrict our research to applied problems, we at once limit its scope to areas already investigated, and very definitely circumscribe its usefulness to future generations.

It may temporarily be the profitable thing to do, but, least of all, do we expect such demonstrations of selfishness from our great universities. It is not a wholesome example for their alumni who go forth each year as their representatives.

The payoff, if you will pardon the expression, is applied research. The foundation—the daddy of it all—is pure research. The former will not be neglected, the latter must not be.

I know that the University of Vermont is playing its full part in furthering research and in the development of research workers.

I use the word "development" advisedly. I think you will agree that research workers can be developed but not created.

A real research worker must be endowed with a certain spark of genius which may, at times, prove quite irritating. He must possess the ability to get a glimpse of things beyond our present horizons and a determination to pursue them whatever the difficulties involved may be.

Lacking this spark, a person may develop into a very useful and much needed "follower of directions" but he is not likely to develop into a real research worker. Vision then, sometimes carried to such an extreme that its possessor may appear somewhat odd, is essential to successful scientific research.

I have already hinted how necessary it is to have persistence and determination coupled with vision in the research worker. Without the former, vision may prove disappointing and quite valueless.

In the field of oxidation and reduction, e.g., we know that potassium dichromate has a greater capacity per mole as an oxidizing agent than has potassium permanganate.

The possibilities of chemical work are greater, but they are not always fulfilled. Potassium permanganate has a higher intensity factor, a greater driving force than has dichromate and hence we find it doing certain chemical work, such as the oxidation of oxalate ion to carbon-dioxide, that the dichromate ion can never do.

So with the research worker. He may have the ability, the vision, the capacity but unless determination and persistence are

there, unless the intensity factor is high, no desirable results may follow.

Fortunately this is something which can be stimulated and developed in the embryo research worker. It is frequently said that nothing succeeds like success. Sometimes we are inclined to agree with that statement and then again, we see evidence that it should be changed to read, "Nothing recedes like success." Be that as it may, it is much more certain that there is nothing which persists like persistence. Put the promising research worker to work, keep him working by whatever proper means may be necessary. By force of example, as he sees you working, by any artificial or even superficial stimuli, the possibility of promotion, the publication of papers, all of these may prove helpful in overcoming stifling inertia. The more he works the easier it will become, the more he will like working and the more he will dislike indolence.

When we find even a spark of genius in a potential research worker, it is our responsibility to develop it to the utmost. Persistence is an essential characteristic of the successful research worker.

Again, the research worker should not resent, but enthusiastically accept, change.

In this disturbed and upset world it sometimes seems that there is nothing we can be quite certain of on the morrow. Need we believe that such is the case? I am sincerely convinced that there are many profound and pleasant things in store for men of goodwill in the days which lie ahead.

Apropos of our discussion to-night it may be said, that if there is one thing of which we can be quite certain, that one thing is change. Things will not be the same tomorrow as they are today, and probably they will be very much different. It is our responsibility to accept these facts and be prepared to meet them. We may not like all the changes which lie ahead of us—all the more essential that we should be adequately prepared to meet them.

The sulfa drugs and antibiotics have done much to improve the health and increase the happiness of our people. The discovery, or rather the liberation of atomic energy could do even more to promote future happiness, but unfortunately great disaster may also follow if it is unwisely used. Let us do all that we can to see that it is directed into proper channels.

A few days ago, I heard a missionary of the Presbyterian Church relate an experience he had while being guided through a jungle by a group of natives. As he awoke one morning and prepared to continue his journey, he was surprised to find his escorts all sitting silently and absolutely motionless.

When he inquired the reason, he was told by their leader that they were waiting for their souls to catch up with their bodies.

It would be unfortunate if research workers were to sit idly by and wait for the souls of men to catch up with their accomplishments, but how very essential it is that moral and religious development keep pace with scientific research.

It has been stated that all things come to those who wait. May I respectfully and not sacrilegiously suggest that such a happy conclusion is much more likely to follow, if we hustle while we wait.

The research worker must not be afraid of the future. He must welcome and not resent change, and he must play his full part in insuring so far as possible, that it is directed into wholesome, constructive channels.

The research worker is, of necessity, a promoter of change and he must be possessed of real enthusiasm for it.

In pursuing scientific research, let us not underrate simple avenues of approach.

In our modern complex civilization we seem to give preference to the things which are difficult and involved rather than the simple and uninvolved.

Particularly is this true of our religious life. Henry Van Dyke once said, "So many Gods, so many creeds, so many ways that wind and wind, when just the art of being kind is all this old world needs."

Thirty years ago, when I was a professor of chemistry in the College of Arts and Sciences of Rutgers University, Dr. W. H. S. Demarest resigned from the Presidency of that institution.

The faculty gathered together for his farewell sermon. A profound message from a really scholarly gentleman was anticipated. We were not disappointed, but some were surprised, when he chose for his text, "What does the Lord thy God require of thee but to do justly, to love mercy, and to walk humbly with thy God."

That is simple. That is profound. We should not feel that

things must be involved and difficult in order to be worthy of our attention. This applies also in the field of research.

About a month ago, a small group of friends were having lunch with Dr. Austin Smith, Editor of the *Journal of the American Medical Association*.

Dr. Smith was telling us about the really great progress which has been made in the treatment and cure of cancer in recent years. He spoke with special appreciation of the profound manner in which this problem is being approached. The study of the cell and changes which take place therein, chemotherapy, the use of hormones, new methods of radiation as a result of the thermopile and related devices, deep x-ray treatment and so on. He was most hopeful because the problem was being approached in such a systematic and scientific manner.

But then near the end of his talk he added this, "But I do hope that other simpler, more or less hit and miss, methods will not be entirely overlooked. They ought not to be if for no other reason because there are so many of them."

Keep in mind that Dr. Smith's main thesis was an expression of appreciation of the scientific manner in which this whole problem of cancer research is being approached. It is significant, however, that he concluded about as follows. "I have the awful feeling that someone who is really stupid will try something which cannot possibly succeed and he will find out that it does."

The significance of that statement should not be overemphasized, neither should it be ignored.

Speaking to the new initiates, and indeed this whole talk is directed primarily to them, I would say, "Do not hesitate to try something which does not seem to be too promising, especially if for some unknown reason you have a definite hunch that it might work." Even in scientific research we should be prepared to take properly calculated risks.

I conclude this part of my talk, which is devoted to a general discussion of scientific research, with a point which I shall not dwell upon because it is unnecessary. It would be unbecoming for me or anyone else to do so.

The most important characteristic of the research worker is, of course, fundamental honesty. I have purposely avoided the use of

the term intellectual honesty because there is only one kind of honesty and that is just plain, old-fashioned, everyday honesty. The research worker may be great in all other ways, but without honesty he becomes a definite liability to his profession.

Honesty constitutes the very foundation upon which all usefulness rests. You may develop an ever so imposing super-structure, but unless it is built upon the solid foundation of honesty, it is but a question of time before it will topple and fall and become a useless, meaningless mass of wreckage.

In building your research program, see that it is built upon a rock. You will work with greater enthusiasm and erect a more permanent structure.

There are some advantages to be gained from growing old, more disadvantages, perhaps, but certainly there are compensating factors.

For one thing, you are not taken quite as seriously by some people as are men of younger years.

People become less critical of what you say. That may not be altogether complimentary, but it does give you a little greater license and develops a boldness which might otherwise be absent.

With these considerations in mind, I am prompted to offer just a few words of advice to this evening's initiates who may be considering teaching as their life's work.

Certainly, the teaching profession should be considered as one of the most important and noblest of all professions. I encourage you to continue with your purpose, provided of course, you have real enthusiasm for it and feel it will be possible for you to subsist on a rather low calory diet.

I wonder if you will not agree with me that current world events have impressed upon us that proper character and religious development constitutes the most challenging need confronting educators today, in whatever field of activity they may be engaged.

As one advances in years, he usually gains at least slightly in wisdom. Sometimes this gain in wisdom is mistaken for a softening process by some people. Frankly, I am not as much concerned as I once was as to whether we succeed in teaching our students a million and two important facts during their four years of college work.

The acquisition of knowledge is important. To acquire the ability to think and reason and analyze is even more so, but I wish we teachers could prove more successful in imparting wisdom. Possibly one of the reasons why we are not more successful is because we do not possess too much of it ourselves. I am inclined to think that is at least one of the factors.

A short time ago I read the following statement on the bulletin board of the Newark Y.M.C.A. "Now that you have committed the golden rule to heart, put it into practice." That challenge has come back to me many times since that day. We teach our students many things. We compel them to memorize endless amounts of relatively inconsequential material. Figuratively speaking, we may even compel them to memorize the golden rule, but how little we assist them in putting it into practice.

We teach our students many tricks. We enable them to do difficult and involved things. We turn out clever chemists, physicists and physicians, but we are not entirely certain that they will prove to be assets rather than liabilities after leaving us. What we most wish them to acquire seems to be readily absorbed by their intellect but not by their hearts and souls. Possibly I am proving unjust to some of you, my colleagues, in ascribing to you, or to us, what I know to be some of my own personal shortcomings.

Do you not feel that what our world needs most today is not more clever men and women but more reliable, more honest, more fundamentally decent men and women? Is that not the big challenge before our colleges and universities? Is it not the thing which will decide whether all else that we may do is of consequence or otherwise?

I am sure I speak for every member of your faculty here assembled when I say that we do feel that challenge and are making sincere, if somewhat, feeble efforts to meet it.

I sincerely hope that you younger men, now entering the teaching profession, may be given the wisdom to do a much better job along this line in the future, than we have done in the days gone by. If you can succeed in helping your students to find something that they can really tie to, I believe you can do the rest of the job in a thoroughly acceptable manner.

I hope your teaching may have the life and sparkle that are made possible as a result of an active program of scientific research. I hope also, that it may have even greater merits, which follow as a result of an adequate appreciation of values which are enduring and profound.

I am afraid this presentation has been a bit patchy. I have not attempted to discuss what might be considered to be the most essential qualities and characteristics of the successful teacher and research worker, but rather, those which I most wanted to discuss. I have very greatly enjoyed being with you, and I hope this talk may in some way prove helpful to you.

I wish you success in the years which lie ahead, and hope you may experience the profound satisfaction which follows as a result of being privileged to make some real positive contribution to add something new to your professional field, and leave it a little richer and a little more highly respected because you have been associated with it.

New in the Family

Katherine Rebecca Duckworth.—Born June 1, 1953, daughter of Prof. and Mrs. Frank A. Duckworth, University of Florida.

Steven Raymond Bryan.—Born June 28, 1953, son of Prof. and Mrs. Gordon H. Bryan, University of Montana.

Beverly Ann Byrum.—Born June 18, 1953, daughter of Dean and Mrs. Woodrow R. Byrum. Howard College, Birmingham.

Kathryn Johnson.—Born August 26, 1953, daughter of Mr. and Mrs. Robert Johnson, State College of Washington.

Craig Henry.—Born July 11, 1953, son of Mr. and Mrs. Murray Henry, State College of Washington.

John Raymond Gosselin.—Born August 18, 1953, son of Mr. and Mrs. Raymond A. Gosselin, Massachusetts College of Pharmacy.

Susanne Mickles.—Born May 21, 1953, daughter of Mr. and Mrs. James Mickles, Massachusetts College of Pharmacy.

Maureen Ann Donovan.—Born June 11, 1953, daughter of Mr. and Mrs. Robert J. Donovan, Massachusetts College of Pharmacy.

Reports of Officers, Committees and Delegates of the American Association of Colleges of Pharmacy at the 1953 Meeting in Salt Lake City, Utah

Report of the Secretary-Treasurer August 1953

Dues have been received from the 75 member colleges. These together with all other receipts and disbursements have been itemized and submitted to the Executive Committee for their consideration and approval. A summary of all disbursements and receipts is attached to this report for publication in the *American Journal of Pharmaceutical Education*.

The Association is now in the best financial condition of its entire history. The increase in membership dues and the increase in number of member colleges has provided the Association with more adequate funds. It is, therefore, in order that the members give thoughtful consideration to the most productive use of our limited funds. Your Executive Committee can function best if it has an understanding of the desires of the members.

A separate itemized statement of the Seminar account is made a part of this report. This balance included the contribution of \$6000 from the American Foundation for Pharmaceutical Education to cover expenditures of the Teachers Seminar on Pharmacognosy and Related Subjects just terminated at the University of Utah. It is anticipated that by careful budgeting this fund will be adequate for all expenses of the recent Seminar.

The summary of all funds of this Association other than the Seminar Account shows a cash balance of \$16,904.90. The Fund for the Study of Pharmacy has a cash balance of \$617.59 and the Vick Chemical Co. fund remains at \$363.70. In addition to these

cash items, the Association owns \$4500 worth of United States government bonds. A certified statement from the Trust Officer of the First National Bank of Iowa City, Iowa is attached to this report verifying possession of these bonds in the Association's lock box.

The Secretary-Treasurer of the Conference of Teachers, Dr. Edward P. Claus, has submitted an itemized report to the Executive Committee for the Conference of Teachers showing a cash balance of \$482.15. This sum has not been included in the General report of all funds of this Association.

It is my suggestion that our Association purchase \$5,000.00 worth of government bonds rather than to carry such a large cash balance.

LOUIS C. ZOFF, *Secretary-Treasurer*

SUMMARY OF ALL FUNDS
BELONGING TO
THE AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY

Assets

1953	Checking Account		
August 1	Cash on Hand	\$14,923.61	
August 1	U. S. Savings Bond	1,000.00	
			\$15,923.61
Fund for the Study of Pharmacy			
August 1, 1952	Cash in Saving Account	\$ 605.43	
January 1, 1953	Interest	\$6.05	
July 1, 1953	Interest	6.11	12.16
August 1, 1953	U. S. Savings Bond	3,500.00	
			\$ 4,117.59
Vick Chemical Co. Research Fund			
August 1, 1953	Cash on Hand	\$ 363.70	
			\$ 363.70
Seminar Account			
August 1, 1953	Cash on Hand	\$ 6,782.71	
			\$ 6,782.71
			\$27,187.61

AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY
GENERAL FUND

August 1, 1952 to July 31, 1953

CHECKING ACCOUNT

Receipts

1952-1953 Receipts	\$32,510.35
U. S. Bond No. M395380G.....	1,000.00
	<hr/> \$33,510.35

Disbursements

1952-1953 Disbursements.....	\$17,586.74
Cash on Hand.....	14,923.61
U. S. Bond No. M395380G.....	1,000.00
	<hr/> \$33,510.35

AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY
SUMMARY OF RECEIPTS

August 1, 1952 to July 31, 1953

Cash on Hand, August 1, 1952.....	\$11,037.67
United States Bond.....	1,000.00
Dues—75 Colleges.....	15,000.00
Application Fees—1 College.....	25.00
Income from Journal.....	1,154.33
Interest on Bonds.....	112.50
Contribution from the American Foundation for Pharmaceutical Education—gift for American Journal of Pharmaceutical Education	5,000.00
Transferred from Seminar Account—Error of December 9.....	120.85
Advertisement in Journal.....	60.00
	<hr/> \$33,510.35

AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY
SUMMARY DISBURSEMENTS

August 1, 1952 to July 31, 1953

Expenses of Annual Meeting.....	\$ 1,030.70
Allowance for District Meetings, AACP-NABP.....	400.00
Contributions to Organizations.....	915.00
Honoraria	575.00

Interim Meeting Executive Committee.....					1,160.72
Curriculum Committee Expenses.....					1,036.21
Delegates to National Drug Trade Conference.....					20.48
American Journal of Pharmaceutical Education.....					8,276.67
Teachers Conference Committee, Expenses.....					50.00
Stenographic services and supplies.....					611.88
Postage, Express, Telegrams and Telephone.....					316.38
Committee on Audio-Visual Aids.....					48.68
Stationery, Mimeographing and Printing.....					520.15
Travel Expense of Officers, AACP-NABP meetings and Miscellaneous Travel Expenses.....					2,329.14
Miscellaneous	4.85	3.60	6.89		
	8.00	24.57	25.00		
	4.95	3.90	1.00		
	6.30	16.67			105.73
Special Item: Richard A. Huff					
Preliminary work on Brochure.....					190.00
					<u>\$17,586.74</u>

AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY
SEMINAR FUND

August 1953

RECEIPTS

August 1, 1952 Cash on Hand.....	\$ 3,196.80	
April 14, 1953 Transferred from AACP General Account to correct error of checks charged to wrong account.....	28.95	
June 8, 1953 Refund Expendable Trust Account University of Michigan.....	81.65	
June 15, 1953 American Foundation for Pharma- ceutical Education	6,000.00	
		<u>\$9,307.40</u>

DISBURSEMENTS

Seminar on Pharmaceutical Chemistry.....	\$ 1,345.10	
Seminar on Pharmacognosy and Related Subjects....	1,179.59	
		<u>\$2,524.69</u>
Cash Balance.....	6,782.71	
		<u>\$9,307.40</u>

Report of the Executive Committee

Association Year, 1952-53

Since the adjournment of the 1952 meeting of the Association, the Executive Committee has met in Philadelphia, August 22, 1952; at Chicago, Illinois, January 22 and 23, 1953; and here at Salt Lake City, August 14 and 15. Minutes for the August and January meetings were published in the January, 1953, issue (No. 1, Vol. XVII) of the *American Journal of Pharmaceutical Education*, pp. 116-123. Copies of the minutes of these meetings were also distributed by mail to all member colleges by Secretary-Treasurer Zopf.

One half-day of the meeting on January 23 was devoted to a joint session with the American Council on Pharmaceutical Education, with full membership of both groups in attendance. Although no vital issues were under consideration, common agreements and understandings were reached concerning current developments relating to deferments, inductions and enlistments of students, proposals that pharmacists be commissioned in the grade of Warrant Officer, the lack of provisions for the advancement in rank of commissioned pharmacists, and ways and means of dealing with matters pertaining to national defense and governmental service which concern pharmacy. Other matters under consideration were possible conflicts between Council action and the AACP Constitution and By-Laws, the policy relative to the collection, compilation and publication of statistical data, hospital pharmacy internships, and the distribution of the final monograph of *The Pharmaceutical Survey*, "The Pharmaceutical Curriculum". Joint meetings with the Council are equally valuable to both groups, since they offer the opportunity of developing closer liaison and coordination of activities. It is recommended that the Executive Committee schedule its interim meetings so that joint meetings with the Council may be continued.

Present Membership. By the election of seven new members at the Philadelphia meeting, the total membership of the Association was increased to 75. All but two of these are located in the continental United States, the other members being the University of Puerto Rico and the University of the Philippines.

Enrollment Data. According to reports submitted to the Chairman of the Executive Committee, the total undergraduate enrollment for the first semester, term or quarter of 1952-53 in all colleges (member and non-member) in the continental United States was 16,639, consisting of 14,955 men, 1,613 women, and 71 special students, not classified as to class standing or sex. A breakdown of the regular students, according to sex and class standings, showed the following:

	Freshmen	Sophomores	Juniors	Seniors	Total
Men	3,365	3,837	3,845	3,908	14,955
Women	410	438	357	408	1,613
	<hr/> 3,775	<hr/> 4,275	<hr/> 4,202	<hr/> 4,136	<hr/> 16,568

A comparison of undergraduate enrollments for previous years shows that the peak was reached in 1949-50, with a total of 20,919. Current enrollment shows a decrease when compared with this figure, of 20.46 per cent; the decrease, when compared with last year's enrollment, is 5.83 per cent.

Graduate enrollment has shown a steady increase during the past several years, with a maximum figure of 596 being reached this year. Forty member colleges reported graduate enrollment for the first semester, term or quarter of this year.

Reports of Admissions, Degrees Conferred, and Spring Enrollment. In accordance with the provisions of Section 8 of Article I of the By-Laws, data have been assembled upon student admissions during the period extending from April 1, 1952, to April 1, 1953, enrollment as on April 1, 1953, and degrees conferred since the June, 1952, commencement. These tabulations are included in this report as a matter of record.

REPORT ON ADMISSIONS TO SCHOOLS AND COLLEGES OF PHARMACY

Based upon reports to the Chairman of the Executive Committee of the
American Association of Colleges of Pharmacy
for the year 1952-53.

STUDENTS ADMITTED TO SCHOOLS AND COLLEGES OF PHARMACY

April 1, 1952 to April 1, 1953

	Fresh.	Fresh. Adm. With Adv. Stg.	Adm. as Soph.	Adm. as Jr.	Adm. as Sr.	Special Students	Total Adm. With Adv. Stg.	Total Adm.
Member Colleges (74)*								
Men	2,648	613	1,471	64	38	14	(2,186)	4,848
Women	343	70	155	11	4	2	(240)	585
Total	2,991	683	1,626	75	42	16	(2,426)	5,433
Non-Member Colleges (1)								
Men	29	0	0	0	0	0	0	29
Women	2	0	0	0	0	0	0	2
Total	31	0	0	0	0	0	0	31
Grand Total	3,022	683	1,626	75	42	16	(2,426)	5,464

REPORT OF DEGREES CONFERRED BY SCHOOLS AND COLLEGES OF PHARMACY FOR THE ACADEMIC YEAR 1952-53

Shown below is a tabulation of the totals for all degrees conferred by all member colleges located in the continental United States within the academic year 1952-53. The report covers all degrees granted subsequent to the spring commencement of 1952 and includes those awarded at the spring commencement of 1953. The tabulation shows totals for the 73 member colleges located in the Continental United States. No report was received from the one non-member college. Totals for two other member colleges, the University of the Philippines and the University of Puerto Rico, are not included.

	B.S. or B.S. in Phar.	M.S.	Ph.D.	Honorary**
Men	3,732*	102	41	14
Women	388	11	3	0
Total	4,120	113	44	14

*Does not include the University of the Philippines.

**Includes 6 Bachelor of Pharmacy and 7 Doctor of Pharmacy degrees.

**Includes honorary degrees, as follows: 1 Doctor of Pharmacy, 10 Doctor of Science, 2 Master in Pharmacy, 1 Bachelor of Science in Pharmacy.

SUMMARY REPORT OF ENROLLMENT IN SCHOOLS AND COLLEGES OF PHARMACY AS OF APRIL 1, 1953

Member							
Colleges (74)*	3,565	4,098	4,119	4,209	74	16,065	574
Non-Member							
College (1)	31	23	33	35	0	122	0
Total	3,596	4,121	4,152	4,244	74	16,187	574

Recent Amendments of the Constitution and By-Laws. At the Philadelphia meeting, three proposals to amend the Constitution and By-Laws, previously submitted in writing to the membership by the Committee on Constitution and By-Laws, were to be voted upon. Proposal A consisted of a series of amendments for the purpose of establishing two classes of membership, active and associate, the latter to consist of colleges which were non-accredited or accredited by the American Council on Pharmaceutical Education with a classification other than A, B, or C. This proposal was adopted in its entirety.

Proposal B involved amendments to Article VII of the Constitution for the purpose of providing for the succession of the President-Elect to the office of President, for the election of the Editor of the American Journal of Pharmaceutical Education, and for the succession of officers in the event of death or other inability to serve. This proposal was also adopted.

Proposal C called for the repeal of Paragraph b of Section 6 of Article I of the By-Laws, which required a member college to obtain approval of the Association of summer session course offerings; to provide for an optional five-year course; and to recognize the degree of Bachelor of Pharmacy for completion of an optional five-year course. After lengthy discussion, during which it was voted to segregate the proposal to repeal Paragraph b of Section 6 of Article I of the By-Laws, now designated as Proposal D, for separate consideration, a motion to table the remaining portion of Proposal C was made and carried.

Subsequently, Proposal D was adopted.

Further proposals to amend the By-Laws were submitted by the Executive Committee and adopted by the Association. These

*Does not include the University of the Philippines.

were as follows: an amendment to Article VIII in order to bring the nomenclature into agreement with that which had been adopted in the Constitution of the Teachers' Conference, and to provide for the annual organization of, and election of officers of the Committee on Teachers' Conference; an amendment of Article XVII, to require a two-thirds vote of the members present and voting to amend or suspend Articles II to XVIII, inclusive, of the By-Laws instead of a simple majority, as formerly required.

Proposed Amendments of Article I of the By-Laws. As required by Section 13 of Article I of the By-Laws, which defines the qualifications for admission to, or membership in the American Association of Colleges of Pharmacy, no change in these qualifications may be made unless the same has been presented in writing at least four months prior to the vote on its adoption. It is further provided that any such proposed change must be presented in the form and wording in which it will be circulated to the member colleges and in which it is to be voted upon at the subsequent meeting. In accordance with these requirements, the Executive Committee presented a proposal to amend what was then Section 7 and is now Section 8 of Article I of the By-Laws, which deals with reports required of member colleges. The proposal was received by the Association and referred to the Committee on Constitution and By-Laws, and has been circulated by that Committee by mail to the member colleges, at least four months prior to this meeting. The effect of the proposed amendments, if adopted, will be to eliminate the requirement for the submission of addresses of persons upon whom degrees have been conferred, require a separate listing of men and women graduates, and provide that both the report on student admissions and the report on degrees conferred be submitted at the same time ("30 days after spring commencement") rather than requiring one report "before April 1," and the other "30 days after the spring commencement," as now provided. The Executive Committee recommends the adoption of these proposed amendments.

Proposed Amendment of Article VIII of the Constitution. President Troy C. Daniels has proposed an amendment to Article VIII of the Constitution which would, if adopted, give to the President-Elect of the Association the right to vote as a member of the Executive Committee. There appears to be no justification for the Presi-

dent-Elect being given ex-officio status and denied the right to vote. Accordingly, a proposed amendment to Article VIII of the Constitution was mailed to member colleges on July 13. However, this has been superceded by a substitute proposal, mailed July 17, which date still meets the constitutional requirement of the 30-day notice, which would, if adopted, give the President-Elect the right to vote as a member of the Executive Committee. The Executive Committee endorses this proposal and recommends its adoption.

Increased Financial Support for the American Council on Pharmaceutical Education. By action of the Executive Committee at the interim meeting held in Chicago last January, the annual appropriation made available to the American Council on Pharmaceutical Education has been increased from \$600.00 to \$1,000.00, to become effective with the next fiscal year. It is our understanding that the two other parent bodies, the National Association of Boards of Pharmacy and the American Pharmaceutical Association, have also approved equal increases in their annual contributions.

Brochure on Pharmacy. For the past four years, the Executive Committee has had before it the proposal to publish a guidance pamphlet for use by the officers of the Association in responding to requests of prospective students of pharmacy, and for the use of the member colleges, if desired, as a means of interesting qualified high school students in a career in pharmacy. A sub-committee of the Executive Committee, consisting of Dr. Richard A. Deno, Chairman, Dr. Lloyd M. Parks and Secretary-Treasurer Louis C. Zopf has been appointed to develop the text and format for such a publication. Members of the Executive Committee have had an opportunity to review this material and have given the project their approval. Present plans are to proceed at once with its publication. It is anticipated that it will be ready for distribution early this fall. Sample copies will be mailed out to the member colleges when it is available. Additional copies may be obtained, in quantities of 100 or multiples thereof, at the actual cost of production, by ordering from the Secretary-Treasurer.

Establishment of the Office of Permanent Secretary. This program, which has been approved in principle by the Association, was again considered by the Executive Committee at the interim meet-

ing of the Executive Committee last January. The report of this discussion, as it appears in the minutes, reads as follows:

"The Executive Committee discussed in detail the recommendation for the establishment of the office of permanent secretary of the AACP. After thoughtful deliberation it was agreed that because of inadequate funds and the lack of interest on the part of the Colleges, such a proposal could not be implemented at this time."

The plan involved a consolidation of the activities and functions of several officers of the Association. Specifically, it was assumed that the Permanent Secretary would be asked to assume the duties now carried out by the Chairman of the Executive Committee, the Secretary-Treasurer, and the Editor of the *American Journal of Pharmaceutical Education*. Quite aside from the question of the increased budget which such an office would require, there appears to be considerable doubt of the desirability of such a change or that it would be in the best interest of the Association. If the Chairman can interpret the sentiment of the members of the Executive Committee, it is doubtful if the present membership would favor such reorganization if it were to be reconsidered at this time. It has been stated that the officers of an organization such as the American Association of Colleges of Pharmacy should be amateurs, rather than professionals. Unless strong sentiment to the contrary develops among our members, it is improbable that further consideration will be given to this proposal.

The Teachers' Seminar on Pharmacognosy and Related Subjects. This seminar, the fifth in the series, all of which have been supported financially by the American Foundation on Pharmaceutical Education, was held last week at the College of Pharmacy of the University of Utah. The Committee on Seminar included Dean L. David Hiner, Chairman, Dr. Heber W. Youngken, Jr., Dr. Edward P. Claus and the *ex officio* officers, President Troy C. Daniels, Secretary-Treasurer Louis C. Zopf and Chairman Joseph B. Burt. A separate report will be made to the Association by the Chairman of the Committee on Seminar, and for this reason no details will be given here. It should be reported, however, that the high standards which have been established for the previous teachers' seminars have again been achieved.

The 1954 Teachers' Seminar on Pharmaceutical Education. In accordance with the action taken by the Executive Committee in its

January meeting, at which time it was decided that the 1954 teachers' seminar would be devoted to teaching and teaching methods, without specific reference to any particular area of subject matter, your Chairman was instructed to solicit invitations from the member colleges willing to serve as hosts for the seminar. A subcommittee on Preliminary Planning, consisting of Dr. Richard A. Deno, Chairman, Dean H. G. Hewitt and Dr. Lloyd M. Parks has been active in developing an outline of the scope of the program. Because the objectives and pattern of the 1954 seminar will differ considerably from those of any of the preceding seminars, the necessity for early planning has been recognized.

Six member colleges have responded to our request for invitations. It is anticipated that the Executive Committee will be in position to announce the time and place of the seminar, and the membership of the Committee on Teachers' Seminar before adjournment of the final session of the Association here at Salt Lake City. Because of the wide appeal which this program will have for teachers in all areas of the pharmaceutical sciences, the attendance is expected to exceed, by a very significant margin, that of any previous seminar.

The Committee on Committees. President Troy C. Daniels has appointed a special Committee, designated as the Committee on Committees, which includes Dr. George L. Webster, Chairman, Dean B. V. Christensen, Dean Karl L. Kaufman and Dean Arthur H. Uhl. This special committee has been asked to function as a "Hoover Commission" in surveying all standing and special committees of the Association, determining their functions and areas of responsibility, disclosing any overlapping of activities which may be found, and ascertaining whether there are other areas of interest not presently covered by the existing committees. It is believed that the report which the Committee on Committees will submit at this meeting will contain many useful recommendations involving the reorganization of our system of committees. These recommendations, if approved by the Association, could conceivably lead to more effective use of our committees in determining the future objectives, policies and procedures to be adopted by the Association.

JOSEPH B. BURT, *Chairman*

A Message from the Historian

Dear Friends:

Unfortunately my state of health makes it impossible for me to attend this year's meeting of the American Association of Colleges of Pharmacy at Salt Lake City. The historical work in the field of pharmaceutical education has progressed since I reported on it one year ago, and I sincerely hope that next year's report will be substantiated by respective publication.

Allow me to assure you that I am with you in spirit.

With every good wish for a successful meeting.

Fraternally

GEORGE URDANG, *Historian*

University of Wisconsin

August 12, 1953

Report of the Editor of the American Journal of Pharmaceutical Education

The financial aspects of the *Journal* appear in the Report of the Secretary-Treasurer and any statement here would be a repetition of that report.

The paid subscription list remains approximately stationary. Perhaps a slight increase due to subscriptions coming from such sources as junior colleges, practicing pharmacists and the industrial area. Recent subscriptions have come from Latin America, India, Japan, New Zealand and Australia. This would indicate a growing

interest abroad in what is taking place in the expanding program of pharmaceutical education in America.

As to the copies of the *Journal* supplied through the courtesy of the American Foundation for Pharmaceutical Education to the presidents of universities and the deans of colleges, as many as twenty have been returned to the publisher by the post office department because the addressees have changed their locations. This occurs most frequently in small colleges where the turn over in administration is most rapid. To correct this, instead of addressing these individuals personally, we have made the address to read simply, "To the Office of the President" and "To the Office of the Dean." This policy has lessened the number of copies returned.

The *Journal* going to the boards of pharmacy through the courtesy of the Foundation also contributes to the task of keeping the subscription list up to date since the board membership is ever changing.

We should have more subscriptions from the educational area where the number is scarcely holding its own. I believe this is due to the fact that new faculty members are not aware of their responsibility for the support of the *Journal* and possibly they do not know there is such a publication. Information of this nature can best be distributed locally and most effectively through the office of the dean. It is easy for a dean to discover who on his faculty is not a subscriber to the *Journal* and urge the staff to make the list one hundred per cent. This is not an impossibility. The dental profession did it, not alone in the case of the lecturers in the basic dental sciences but with members of their clinical staffs.

From the time when the American Foundation for Pharmaceutical Education came to the support of the *Journal* we were urged to increase the circulation with our own group. This would be an indication of the worthiness of the *Journal*. This we did not do. All we did was to double the price of the annual subscription.

The objective for increasing the circulation of the *Journal* is not alone to give it greater financial support but to increase the extent to which it is read and thereby increase its usefulness as a teaching and an educational tool. If it is not read there is no use in printing it.

As Editor of the *Journal*, I am grateful for the freedom I have been given through the years in editing it. On the other hand I have yearned periodically for suggestions as to what its policy should be—what to print and what not to print.

Of course, we are obligated to print the proceedings of our annual meetings, the reports of committees and delegates, the papers read in general sessions and in the Sections of the Conference of Teachers. Beyond these obligatory printings I have sought articles of a scholarly nature not published elsewhere which were germane to pharmaceutical education, as well as letters, local news items, and items from affiliated organizations that are of general pharmaceutical interest. Considerable care has been taken to report the activities of the American Foundation for Pharmaceutical Education because of its immense importance in the support of pharmaceutical education and research.

The reporting of news items from the colleges has always presented problems. I recall that a few years ago a member of the Executive Committee raised the question of the need of reporting the names of students who have been elected to honor societies on the ground that these names were of little interest to our readers and it was a needless expense. However I have consistently printed the names of students who have made the Phi Beta Kappa and Sigma Xi Societies and those who have received general university honors. As a rule I have not printed the names of the students making Rho Chi membership because of numbers although I think it would be desirable. I even think it would be wise to include the names of students who become fraternity or sorority initiates in the news items. There is nothing that interests a student so much or ties him so firmly to a publication as to see his name in print. Newspapers realize the importance of this and will take the slightest excuse to get a list of names in their columns. It is a method which induces a large number of people to read the paper and that is what we need to have done in the case of the *Journal*. It is a tragedy if a student is allowed to graduate from a college of pharmacy without having a first hand acquaintance with the publications of our national professional and pharmaceutical literature for after graduation they will be exposed to a pharmaceutical press which considers pharmacy synonymous with Fair Trade. If alumni are to be asked to support

pharmaceutical education the place for them to become acquainted with its problems is in the pages of the *Journal* and the place for them to make that contact is in the college and the time is during their undergraduate days. But to attain this end will require an effort on the part of every member of the faculties. It cannot be attained by simply telling the student to "browse" in the library. I recall that in my own college days there were other places in which I preferred to "browse" rather than the library. Students' habits have not changed materially in sixty years.

At times I have questioned whether so much space should be devoted to news items. Several deans have said that they obtain many valuable suggestions from the news items and at Philadelphia last year, Dr. Robert L. Swain said the name of the section on Notes and News should be changes to read "Pharmaceutical Education on the March." I had not realized before that in that section more than in any other place is recorded, four times a year, the progress of pharmaceutical education. It should be noted here that this record is made possible by the conscientious and gratuitous work of the collaborators. It was the original intention that each college dean should name some younger faculty member as a collaborator to furnish news items for the *Journal*. Where this has not been done I have used the name of the dean. I think, however, deans should realize that there is an activity that would help to develop the talent of a younger faculty member in reporting. There are a few institutions that are conspicuous because of their absence in the news items. The deans should see to it that this is corrected in order to make the historical record complete.

The section of the *Journal* entitled "Gleanings from the Editor's Mail" should receive stronger support than it does. I am convinced after the experiences of a long life that I am not different from other men. When the Nebraska State Journal or the Omaha World Herald comes to my door, I first scan the first page for national and international news. Then I turn to the columns entitled "The Public Mind" in the one and "The Public Pulse" in the other, in order to get a cross section of the thinking of and the reactions of the public mind as to what is going on. When *Time* and the *Saturday Evening Post* come I read the "Letters" first for the same reason. "Gleanings from the Editor's Mail" offers a forum where pharmaceutical edu-

cators should express their views on current happenings. The paucity of expressions is an indication we have no problems or are not a thinking group. Neither of which is true.

At least two complaints have been made to the effect they would like to see some editorials besides those written by the Editor but when I have asked individuals including those who made the complaints to write editorials there has been nothing but silence.

What happens to pharmaceutical education depends upon what we think. If what we think does not have public expression, it is of little avail. Any forward movement depends upon the soundness of our thinking and the publicity it is given. If we wish to promote pharmaceutical education we must keep the problems before our group constantly. To help in attaining this end is the only reason I have gone to such length in writing the 1953 Report of the Editor of the *American Journal of Pharmaceutical Education*.

RUEUS A. LYMAN, Editor

Report of the Committee on Relation of Boards and Colleges of Pharmacy

The most frequently discussed topic at the district meetings this year was the resolution presented by the Curriculum Committee of the American Association of Colleges of Pharmacy at the 1952 meeting in Philadelphia. This resolution, providing for a mandatory pre-professional college requirement, was discussed at all but one of the eight district meetings. Three of the districts presented resolutions concerning the original proposal. These are included later on in this report. Two were definitely opposed to the resolution while one approved it in principle and with modification. One additional district appeared to be opposed to it but no vote was taken. On the basis of the limited number of opinions expressed, it is not possible to draw any conclusion as to whether or not the districts as a whole approve or disapprove the idea of a mandatory pre-professional curriculum for all colleges of pharmacy.

Other topics considered at most of the district meetings were board examinations and apprenticeship requirements. This latter topic was generally discussed in connection with practical experience starting after completion of one year of pharmacy college work and continuing after graduation. The district discussions on this subject seem to indicate a definite trend in that direction. Only one district included the subject of practical experience as part of the college training. Apparently this approach to apprenticeship has not yet met with general approval. Last year, seven of the eight districts had papers presented on it.

Once again the American Association of Colleges of Pharmacy was represented at each district meeting by one of the national officers. President Daniels was the representative at Districts 4 and 7; President-Elect Keif at Districts 5 and 6; Chairman Burt of the Executive Committee at Districts 1 and 2; and Secretary Zopf at Districts 3 and 8.

A total of nine resolutions were submitted to this committee for presentation to the AACP. Two of these expressed essentially the same thought and they have been combined, making eight resolutions from the districts to be presented. Some of these resolutions do not require action by this group but are presented on request of the Secretary and to give information.

The resolutions are:

District No. 1:

Be it resolved that District No. 1 go on record as opposing the proposal from the Curriculum Committee of the AACP for a pre-professional requirement.

Also submitted by **District No. 5.**

District No. 2:

Be it resolved that the Board and Colleges of District No. 2 recommend that the AACP consider the establishment of a committee, the function of which will be (1) to encourage colleges of pharmacy to further increase their activities in bringing their educational programs to the attention of the public, and (2) to furnish guidance to colleges in such activities.

District No. 5:

Be it resolved that the Fifth District recommends that the Executive Committee of the AACP restudy the possibility of establishing and maintaining a roster of professional personnel and teachers placement bureau.

Be it resolved that District Five recommends that the Executive Committee of the AACP and the officers of the NABP study the problem of improving public relations through increased emphasis on press releases favorable to pharmacy, with the idea that these organizations will make subsequent recommendations to the APhA or to other groups for their action.

Be it resolved that the Fifth District favor the publication of a brochure, by the AACP, on pharmaceutical education emphasizing pharmacy as a career for high school students.

Be it resolved that District Five does not object to simultaneous scheduling of various sections of teachers conferences at the national meeting of the AACP for 1953.

Be it resolved that District Five is in favor and votes approval of having the AACP meeting preceeding the APhA Convention.

District No. 8:

Whereas, pre-professional education is generally accepted as a necessary educational requirement for professional study in order to provide individuals with a broad background befitting to professional men and women; and, whereas, pharmaceutical education has had no formal pre-professional educational requirements, be it resolved that District 8, NABP and AACP approve in principle a two-year pre-professional educational program prior to professional study, and that it encourage the Curriculum Committee of the AACP to review its resolution presented at the Philadelphia meetings; and be it further resolved that the Curriculum Committee in its deliberation, delete quantitative details pertaining to specific course requirements.

The officers recommended for the current year will be recorded in the list of committees to be published in the *American Journal of Pharmaceutical Education*.

Summary of the Reports of the Meetings of the Districts

District No. 1:

Fifty registrants attended the sessions which were held in Burlington, Vermont on April 20 and 21, 1953. The presiding officers were Russell E. Brillhart, Chairman for the Colleges, and Hazen J. Russell, Chairman for the Boards. Ray S. Kelley, who had been secretary of the district for the past seven years, resigned that position. Rhode Island was selected as the 1954 meeting place. The time is to be decided by the local committee.

District No. 2:

One hundred and twenty-five registrants, the largest registration for any of the district meetings, attended the sessions of District No. 2 in Albany, New York. A teachers' seminar devoted to, "The

Biological Sciences in the Pharmacy Curriculum" was held on Sunday afternoon prior to the first regular meeting. Dr. Carroll V. Newsom, Associate Commissioner for Higher and Professional Education, New York State, and Dr. Carter Davidson, Chancellor, Union University, were guest speakers. Chairman for the Colleges was Chauncey Cooper, and for the Boards, E. O. Wiseman. New York City was selected for the 1954 meeting to be held sometime in March.

District No. 3:

The meeting was held in Charleston, South Carolina, February 23-24, 1953. Most of the first day's sessions were devoted to a discussion of board examinations. A distinctive feature of this part of the program was the presentation of "Model State Board Examination as Prepared by Colleges." Five fields were covered by faculty members from five different schools.

W. Paul Briggs was the banquet speaker. The sessions were presided over by Tom Wyatt, Chairman for the Boards and Karl Goldner, Chairman for the Colleges. The 1954 meeting is to be held in Mobile, Alabama during the first two weeks of March.

District No. 4:

Ann Arbor, Michigan was the site of the 1953 District 4 meeting. "Legal Implications of the Drug Store Training Requirement" was the title of an interesting paper presented by Mr. Warren H. Resh, Assistant Attorney General, State of Wisconsin. There was a lengthy discussion of the pre-pharmacy requirement but no vote for or against was taken. Dean Daniels was the banquet speaker.

The sessions were presided over by Tom D. Rowe, Chairman for the Colleges and O. K. Grettenberger, Chairman for the Boards. Lexington, Kentucky was selected for the 1954 meeting, the dates to be May 3 and 4.

District No. 5:

Mrs. Ella Myers, Chairman for the Boards and Joseph B. Burt, Chairman for the Colleges, presided over the sessions which were held in Lincoln, Nebraska, May 3, 4 and 5. Secretary Rabe stated that the meeting was most successful. During one entire day, the Board representatives and the College group had completely separate meetings. The result of these separate meetings were reported and discussed in joint sessions held the following day.

The 1954 meeting is to be held in Des Moines, Iowa at a date yet to be determined.

District No. 6:

The meeting was held in St. Louis, Missouri, March 16 and 17. The presiding officers were: Charles W. Riley, Chairman for the Boards and A. F. Schlichting, Chairman for the Colleges. A panel discussion on apprenticeship requirements was one of the high lights of the program. Both Board and College members appeared on the panel. "Television for In-service Training of Pharmacists" was the interesting title of a paper presented by N. M. Ferguson.

The 1954 meeting is to be held in Oklahoma City sometime during March.

District No. 7:

David W. O'Day, Chairman for the Colleges and William H. Durham, Chairman for the Boards, presided over the sessions which were held in Laramie, Wyoming, May 1 and 2. Forty representatives were in attendance. It was decided to have future meetings extend for two full days rather than for one and a half as has been the custom. Among the interesting papers presented was one by J. C. Kopet of the Washington Board of Pharmacy entitled, "Organization of Boards of Pharmacy as a Part of the Executive Branch of State Governments." Seattle, Washington was selected for the 1954 meeting, the time to be late April or early May.

District No. 8:

The meeting was held in Albuquerque, New Mexico, May 7-9. Chairman for the Boards was Fred Kohler and for the Colleges, Willis R. Brewer. A panel on pre-professional requirements was one of the highlights of the College session. Another was a paper entitled, "Improvement of Pharmacy College Teaching through Graduate Student Training", presented by Wilson H. Ivins, Associate Professor of Education, University of New Mexico. The 1954 meeting will be held in Tucson, Arizona, April 29-30 and May 1.

TOM D. ROWE, *Chairman*

Report of the Committee on Libraries, 1953

Following appointment of the Committee on Libraries last autumn, the Chairman outlined a suggested program to the members. It soon became evident that effective implementation of this program would require active participation by trained librarians.

In November, a representative of the Committee on Committees requested a statement on the functions and duties of the Committee on Libraries. With the approval of a majority of the members of the Committee on Libraries, the following statement was submitted:

"The Committee on Libraries should be directed by the Association to devise, perfect, and maintain channels for effective cooperation with the organized librarians in colleges of pharmacy in the solution of such problems as specification of qualifications for library personnel, minimum lists of holdings, satisfactory library patterns in different types of institutions and suggestions for developing good library habits in students."

At the January, 1953 meeting of the Executive Committee of the Association, the Chairman of the Committee on Libraries requested authorization and help in enlisting cooperation from the Pharmacy Group of the Medical Library Association and from the Pharmaceutical Section of the Science-Technology Division of the Special Libraries Association.

The Executive Committee approved this request and authorized attendance by the Chairman of the Committee on Libraries at the annual meetings of the two associations. The Chairman of the Executive Committee corresponded with officials of the two associations and subsequently the Chairman of the Committee on Libraries worked out the details for presenting a proposal for effective cooperation with the librarians.

Briefly, the proposal was to create a Joint Committee on Pharmacy College Libraries composed of six members, two each from the AACP, the Pharmacy Group of the MLA, and the Pharmaceutical Section of the SLA.

The Chairman of the Committee on Libraries attended the fifty-second annual meeting of the Medical Library Association in Salt Lake City in June. As authorized by the Executive Committee of the College Association, he appeared before the Board of Directors of the MLA to invite them "to join the College Association in or-

ganizing the Joint Committee on Pharmacy College Libraries, and to appoint or elect two representatives to this Joint Committee".

The Board endorsed the proposal and directed their incoming President to appoint two representatives, preferably one from an independent college of pharmacy library and one from a university-type college of pharmacy library.

The Chairman of the Committee on Libraries also spoke on the proposed Joint Committee at a meeting of the Pharmacy Group of the MLA. A second member of the Committee, Dr. George E. Osborne, addressed the Group twice, on Faculty and Student Use of the Library, and on The History of the Committee on Libraries of the American Association of Colleges of Pharmacy.

The Chairman of the Committee on Libraries also attended the forty-fourth annual convention of the Special Libraries Association in Toronto later in June. He presented an identical invitation at a luncheon meeting of the Pharmaceutical Section.

The Section endorsed the proposal and directed the incoming Chairman to appoint two representatives, preferably from pharmaceutical libraries of industrial concerns.

Formation of the Joint Committee has thus been assured. Its organization is such that a majority will be college personnel, and also a majority will be trained librarians. At the same time, the minorities will bring points of view from librarians in industry and from college teachers.

As you read this, the representatives from each of the two library groups have doubtlessly been appointed. The incoming President of the College Association will soon appoint the two Association representatives. The 1953 Committee on Libraries will have requested the Executive Committee to discontinue the Committee on Libraries as it has existed since 1933 and to recognize the Joint Committee in its stead. (No corresponding modifications are desirable or planned in the Pharmacy Group of MLA or in the Pharmaceutical Section of SLA.)

The Chairman of the Committee on Libraries will have requested funds from the Executive Committee to permit a meeting soon of the Joint Committee. The two library associations have been assured that, "the College Association is not seeking financial commitments from either of the associations of librarians". It will also be

desirable, if funds are available, for a representative of the College Association to attend next year the annual meeting of one or of both of the library associations.

The organizational meeting of the Joint Committee will doubtless be devoted to definition of its own objectives and to delineation of a program designed best to accomplish them.

Interest in the Joint Committee has been expressed by members of the American Council on Pharmaceutical Education. The Secretary and the Director of Educational Relations have been authorized to cooperate with the Joint Committee by securing certain data relating to pharmacy college libraries for the Joint Committee. The colleges will be requested to furnish these data when submitting the Annual Progress Reports this fall.

Members of the Committee on Libraries are most hopeful that the new Joint Committee will assume the burdens carried by Dr. Lee and his associates for twenty years, and will develop a realistic program helpful to students, teachers and librarians in the colleges of pharmacy.

R. A. DENO, *Chairman*

Report of Committee on Activities for Alumni

The members of the 1952-1953 Committee on Activities for Alumni were furnished with a brief abstract of each annual report (1915-1952) made to this Association by the members of the Committees who preceded us.

A study of these reports from 1915 to 1939, the Committee on Activities of Students and Alumni—as it was then known—placed great emphasis on activities for the students. Since 1939, the Committee, under its present name, has presented reports which have been concerned with activities for the Alumni. The reports for the last fourteen years have discussed refresher courses, a card index of Alumni, better programs for Alumni Meetings, newsletters for the Alumni, placement bureaus and matters of like nature under various

names. The wording of the reports has been different but the general theme has been the same during these several years.

Your present Committee by a vote of 6 to 1 recommends that the Committee on Activities for Alumni be discontinued as a standing committee of the American Association of Colleges of Pharmacy.

RAY S. KELLEY, *Chairman*

Report of the Chairman of the Committee on Problems and Plans

During the year the committee has held to its assigned function of making a study of and keeping before the Association those problems which it considers most important for the advancement of pharmaceutical education. Of course those problems were revealed by The Pharmaceutical Survey. But The Survey did not solve these problems. What it did was to expose them and point the way to possible solutions.

If progress is made it will depend upon what we do with The Survey findings. The Survey was not the end of a period in pharmaceutical education. It was the beginning of a new period with new horizons.

The chairman of this committee believes men do their best work on subjects in which they have their greatest interest. Naturally these will be in their own fields of specialization or in areas with which all fields of specialization are concerned. Each man has taken the subject of his choice and allowed to proceed in his study according to his own plans. The work is therefore entirely individualistic. They have written out of their own experiences.

In some cases committeemen have chosen to continue the studies they made in previous years and some of the papers that took more than a year to complete have already appeared in the *Journal*.

As on previous occasions the chairman has indicated the trends of the studies in this report. Time is inadequate to either summarize the studies or adequately discuss them. These individual studies will appear in future issues of the *Journal* as space permits, as a part of this report.

How to inculcate into the mind of the pharmacy student a high degree of professional morality and integrity is still a major problem and several men have written on what is actually being done in their schools. What more comprehensive general training will do to promote pharmaceutical education within the university community and what it will do to the morale of the pharmacy student is demonstrated by the experience at the University of Southern California. It is not unreasonable to expect that time will show a similar reaction in public attitude and in professional practice. The choice of subjects for study shows that the improvement in teaching is still of prime importance in the minds of educators and probably always will be. No group is doing more to improve their teaching and to modernize the curriculum than the pharmacognosists. Equally intent on their area are the pharmacologists. In the newer teaching field is the subject of manufacturing pharmacy. What to include in and how to teach advanced courses is the problem.

As a matter of fact there is no field in the pharmaceutical area where teachers are satisfied with their teaching. As long as this attitude persists there will be progress in teaching methods in every field.

Two very constructive suggestions have been made by committee members. One is that the AACP should create a standing committee on grants which would make a study of all types of grants that are available to pharmaceutically trained personnel.

It is well known that there are numerous sources of grants which are not generally known to the pharmaceutical group.

One other suggestion is that an annual seminar be established for teachers of pharmacology in schools of pharmacy perhaps along the lines of the Plant Science Seminar. While there are special societies in this field available to properly qualified pharmacologists there is no organization which has as its aim the improvement of teaching methods by those who teach pharmacology in schools of pharmacy. There are special problems. There are those who will again say

pharmacy is over organized. There is no over organization if there are special needs which are not cared for by existing organizations. The problem is under study.

From time to time I have called attention to the fact that it is difficult to separate the Report of the Editor of the *American Journal of Pharmaceutical Education* from that of the Chairman of the Committee on Problems and Plans. The work of the two are so intertwined. President Daniels spoke the truth in Philadelphia when he said he had found that the Committee on Problems and Plans was the life blood of the *Journal*, a fact that the editor has known for a long, long time.

RUFUS A. LYMAN, *Chairman*

Report of the AACP Committee on the Status of Pharmacists in the Government Service

The Committee is pleased to present its report covering the fiscal year, July 1, 1952 to July 1, 1953. This report will deal principally with the status of pharmacists in the Army and Air Force Medical Service Corps, because Major Arthur Einbeck, chairman of the General Committee on the Status of Pharmacists in the Government Service, will discuss with you later the situation as they prevail in the other governmental branches.

The following tabulations show the number of students enrolled in the four universities at which ROTC units have been established. A brief discussion of these data will follow.

The University of California

Freshmen	22	}	65	
Sophomores	43			
Juniors	31	}	60	
Seniors	29			
Number of 2nd lieutenants commissioned in the Medical Service Corps.....				24
Attending summer camp, 1953.....				30

The University of Minnesota

Freshmen	28	}	62	
Sophomores	34			
Juniors	34	}	54	
Seniors	20			
Number of 2nd lieutenants commissioned in the Medical Service Corps.....				9
Attending summer camps, 1953.....				33

The Ohio State University

Freshmen	None		
4th Year	26	}	59
5th Year	33		
Number of 2nd lieutenants commissioned			
in the Medical Service Corps.....			30
Attending summer camp, 1953.....			16

The University of Wisconsin

Freshmen	62	}	108
Sophomores	46		
Juniors	32	}	55
Seniors	23		
Number of 2nd lieutenants commissioned			
in the Medical Service Corps.....			24
Attending summer camps, 1953.....			35

It will be noted that during the 1952-53 academic year, 463 pharmacy students were enrolled in the four pharmacy ROTC units. This is a minimum number, because no data was available from one of the schools as to how many freshmen pharmacy students were enrolled in the pharmacy ROTC 114 pharmacy students (mostly juniors) were attending the six weeks' summer camp in Ft. Sam Houston, Texas. Attendance at this camp, together with graduation

with a B.Sc. in Pharmacy degree and the successful completion of the courses in military science and tactics is a requirement for a 2nd lieutenancy in the Medical Service Corps Reserve. Eighty-seven pharmacy graduates were commissioned as 2nd lieutenants in the Medical Service Corps Reserve. The number of students enrolling in the pharmacy ROTC basic and advanced courses is steadily increasing from year to year, so much so, in fact, that pharmacy ROTC units rank either first or second in size to all other professional ROTC units on the campuses.

On June 22, 1953, Colonel Floyd L. Wergeland, M.C. Chief, Education and Training Division, Surgeon General's Office, made a "visit of observation" to the University of Minnesota. Your chairman had the pleasure of a luncheon conference with Colonel Wergeland, Colonel R. T. Connor, PMST at the University of Minnesota, and a number of assistant PMST's at the University. At that time, Colonel Wergeland discussed the Professional Students' Corps, its application to the medical and dental programs, and indicated that additional information would be forthcoming on this matter. He did not say whether or not students now enrolled in the pharmacy ROTC units would be eligible for this contemplated Professional Students' Corps. At the chairman's suggestion, Colonel Connor, PMST, addressed a letter to Colonel Charles L. Leedham, MC, Chief, Education and Training Division, Surgeon General's Office, making inquiry about this point. In a letter under date of July, 1953, Colonel Leedham replied to Colonel Connor's letter saying that "Students in pharmacy colleges will not be eligible for appointment in the Professional Students' Corps. As presently contemplated, the Professional Student Corps is a graduate program, and applicants for commission must be enrolled in a college of medicine, dentistry or veterinary medicine as approved by the Department of the Army and possess a degree or equivalent academic credit for a degree." He further stated that the "implementation of the Professional Student Corps program is currently being postponed until the Department of Defense has reviewed certain policies and procedures of the Medical Services of the three military departments, and also the present and proposed student procurement programs, the latter in order to insure no interference with the Doctor Draft Act, as well as to prevent undesirable competition between services." Colonel Leedham also said

that as soon as they were able to implement the Professional Student Corps program, announcements would be made to the deans of all schools concerned in addition to the usual pronouncement in military publications. If, and when, any of the four universities which now have ROTC units convert to the General Military Science ROTC program, it would follow that the pharmacy units in those institutions would be terminated. This committee believes that that is a very remote possibility. We believe that the General Committee on the Status of Pharmacists in the Government should oppose such a move. As the months pass by, fewer and fewer of the 2nd lieutenants in the Medical Service Corps Reserve are being ordered to active duty, for Pharmacy ROTC units are contributing materially to the building up of a strong Medical Service Corps Reserve which is so essential to the strong national defense.

In our opinion, pharmacy students enrolled in Pharmacy ROTC units are less and less concerned about being ordered to active duty before they have attained licensure. We are of the opinion that requests for delay in call to active duty in order to complete the requirement for licensure are being approved. Such actions have done much to dispell the fear of enrolling in Pharmacy ROTC units on the part of students who otherwise might be very much interested. Evidently, the representations on this point made by the Steering Committee in Washington have borne fruit.

In conclusion, I consider it my duty to bring to your attention some facts re the ROTC summer camp, assignment of Pharmacy ROTC Reserve Officers when called to active duty, etc., which have come to me from reliable sources. If the conditions as described to me prevail, it is recommended that this Association request the Steering Committee of the General Committee on the Status of Pharmacists in the Government Service to investigate these reports at the Surgeon General's Office and, if found to be true, take the necessary steps to correct them.

The Public Law that authorized the creation of the four Pharmacy ROTC units and also the Army Training Programs written and designed to implement this Public Law, were intended to give a back-log of Pharmacy Officers who were qualified to operate the pharmacies in the numerous Army hospitals that would be required in an all-out war. The Korean conflict, with all its unorthodox

manifestations, placed an immediate demand on the Medical Service to provide a large number of Junior Grade Medical Service Corps Officers for us in Korea.

Bearing in mind the intent and objectives of the Public Law previously referred to, let us review briefly: 1) the present normal course of training given pharmacy graduates who were 2nd Lieuts. in the Medical Service Corps Reserve when they are called to active duty; and 2) the training that they received during their four years in the Pharmacy ROTC units.

(1) When called to active duty, these Medical Service Corps Reserve Officers are assigned to a Medical Field Service School at Fort Sam Houston, Texas, to take the 802 course which is the basic officers course for the Medical Department. When completed, these officers are transferred to tactical units (Divisions of Corps) for service in this country. In these units they perform the normal duties of a Company Officer until they are sent over-seas to far-eastern command.

(2) During the four years in Pharmacy ROTC, they receive 232 hours of constructive credit for technical pharmacy instruction. They also receive 9 hours instruction in pharmacy military service, 3 hours in military law, and 11 hours of leadership, and 5 hours in general military administration. The current Army Program states that these men are being trained to be Junior Officers in the Army Medical Service and from the data just given covering their training schedules, there can be little question that they were being trained to be pharmacy officers. More and more reports coming to your Committee indicate that once the pharmacy trained Medical Service Corps Reserve Officers are called to active duty, the majority see little or absolutely nothing of the pharmacy. A good case in point is the pharmacy at Brooke Army Hospital. This hospital is one of the largest medical military installations in the world, having approximately 2000 patients. The two pharmacies in this hospital are theoretically commanded by a Medical Corps Officer who is a registered pharmacist. Apparently it has been the policy for a number of years to place a Medical Service Corps Officer who is soon (in a month or two) to be relieved from active duty, in charge of the pharmacy. We are advised that the non-commissioned officer in charge of the pharmacy is a "graduate" of the 16-week Army Pharmacy Technician

School. Licensed pharmacist draftees are kept busy in the back of the pharmacy filling capsules, orders, etc. under the direction of the Army-Trained Pharmacy Technician. Usually, in the Medical Field Service School there are probably a dozen or more licensed pharmacists who would like nothing better than to be in the pharmacies at Brooke Hospital rather than being assigned jobs as platoon leaders, instructors on weapons, instructors of administration, battalion commanders, or any other job for which a man is needed.

Col. Robert L. Black, Chief of the Medical Service Corps, stated in his graduation address of 31 July, this year, that the four pharmacy units were archaic and out-moded and were a thing of the past. He stated that General Military Science Branch would soon take their place. The Colonel made it clear in his graduation address that it is the intention of his office to get the Junior Officers for the Medical Service Corps from Branch General units throughout the country and place less and less emphasis on the four Pharmacy ROTC units. The General Military Science Branch has been in existence for only one year. The training in Branch General requires 3 clock hours per week for basic training and 5 clock hours per week for advanced training. In the present Pharmacy ROTC units only one 50-minute period of lectures, demonstrations, etc., is required. If the General Military Science Branch were adopted by the universities at which there are now Pharmacy ROTC units, the increased number of hours required in both the basic and advanced courses would preclude any pharmacy students from enrolling in it—this, because the present curricula are already over-crowded. It would appear to your Committee that this Association should use its influence to retain the present four ROTC units in status quo, and that the graduates from these units should be given preferential pharmacy assignments when called to active duty. It appears to your Committee that the statements made by Col. Black in his graduation address would not encourage those students who were enrolled in the Pharmacy ROTC units and would very definitely discourage any new students entering these schools from enrolling in the basic pharmacy ROTC course.

Another matter that has been called to our attention is the status of the Army veterinarians. When animals were separated from the Service, the veterinarians were in danger of a "set-back" in the

Army. However, due to activities of the American Veterinarian Association, material gains have resulted. By Act of Congress, Army Veterinarians now draw \$100 a month additional pay regardless of their rank. The question arises as to why this discrimination. It cannot be because of the shortage of veterinarians in the Army because they have a back-log of veterinarians who have requested active duty. It cannot be because of their superior educational training because in the Medical Service Corps a number of persons have had six years of college training and there are men who have their Ph.D. and Master degrees. The only answer we have to this question is that the American Veterinarians Association has made such strong representations to Congress that the veterinarians were included with the doctors and dentists in the bill.

In closing, it might be pointed out that the ATP (Army Training Program 145-8) which sets up the training for the summer camp follows very closely the course of instruction that is designed to train Medical Service Corps Officers as assistant battalion surgeons. Pharmacy students enrolled in the Pharmacy ROTC units and who are cadets at the summer training camp rarely get more than a "tour" through an Army hospital. As near as we can tell, the majority of pharmacists that are being brought into the Service are not being brought in as pharmacists but rather as additional Junior Officers for the Medical Service Corps.

CHARLES H. ROGERS, *Chairman*

Report of the Committee on Educational and Membership Standards

Introduction

Last year the report of this Committee was devoted to a consideration of resident requirements for graduates of foreign pharmacy schools desiring to enter AACP member colleges and to the patterns

of pharmaceutical education current in Great Britain and Canada. This year it seemed to be a logical sequence to continue the study of pharmacy education in foreign schools. While it has not been possible to include all foreign countries in this year's report, it is suggested that there may be merit in continuing the effort for another year so that it may be world-wide in scope.

In seeking data concerning pharmaceutical education in foreign countries two characteristics are particularly noteworthy—first, the antiquity of the art coupled with the serious efforts which have been made through the centuries to prepare competent practitioners and second, the prodigious extension and progress which have been made during the past twenty years.

Evaluation of Credits from Canadian Schools

Following the Philadelphia AACP meeting last year a copy of our Committees report was sent to Professor Daniel H. Murray, Secretary of the Canadian Conference of Pharmaceutical Faculties. As a result of this the Canadian Conference has requested that, in connection with the assessment of the training of Canadian graduates wishing to transfer to the United States, attention be called to the fact that the colleges of pharmacy in several of their provinces require a five-year high school course for admission. This means that these matriculates have had the equivalent of one year of college work before entering their pharmacy course. In view of this the Canadian Conference believes that there is a parity of training between the work in these schools and those in the United States. It is the hope of the Canadian Conference that cognizance of this situation will be taken into consideration when the credentials of these graduates are being evaluated by Colleges and Boards of Pharmacy in the United States.

Pharmaceutical Education in Central America

At present authentic data is at hand for consideration of only three of the six Central American republics. During the three hundred years of Spanish domination education and culture made but limited progress in this area of the world. Since 1821, with the liberation of all the Central American Colonies, these countries have been characterized by frequent internal struggles and limited economic resources. Their language and culture continue to show the influence

of Spanish domination. At the present time their elementary and secondary school programs do not appear to be on a parity with those in the United States. Judged by similar standards their university facilities for laboratory work are generally far from adequate.

Nicaragua

In Nicaragua, the largest of the Central American republics, pharmacy courses have been offered in three institutions. They are Central University located in Managua, University of Leon in Leon, and University of Granada in Granada. Leon University was founded in 1812, Granada University some fifty years later, and Central University in 1941. Due to internal friction, in 1946, the Central University Schools of Medicine, Law, and Pharmacy were closed with students in these areas transferred to either Leon or Granada. In 1947 the name of the University of Leon was changed to the National University of Nicaragua.

For admission to the pharmacy curriculum students must have completed an accredited secondary school program. The pharmacy course extends over five years and leads to the degree of Doctor of Pharmacy. In addition to the customary subjects courses in mineral chemistry, mineralogy, and geology are required. The total number of pharmacy graduates each year is small, being fourteen in 1944.

El Salvador

Pharmaceutical education in this country² is offered by the School of Pharmacy and Chemistry at the Autonomous University of El Salvador. This university was founded in 1841 and is located in the capital city of the republic, San Salvador. It has been intermittently under the control of the Ministry of Education and its own autonomy.

For admission to the School of Pharmacy and Chemistry the student must have completed the secondary school program. The course of study in this School requires five years and leads to the Doctor of Pharmacy and Chemistry degree. Here also the curriculum includes courses in geology and mineralogy with the addition of deontology (ethics). In 1945 the total enrollment in the School of Pharmacy and Chemistry was eighty-seven.

Costa Rica

A School of Pharmacy was established in the republic of Costa Rica in 1897.³ In 1941 the new University of Costa Rica united into

one corporation the Schools of Law, Pharmacy, Agriculture, Education, and Fine Arts. The pharmacy school is located in the capital city of San José.

Admission to the School of Pharmacy is open to graduates of the secondary school curriculum which requires six years for completion. The pharmacy course extends over four years. Its content rather closely parallels that found in most pharmacy schools in the United States. For the degree, Licentiate in Pharmacy (*Licenciado en farmacia*), two years of internship are required in addition to completion of the four year academic course.

Pharmaceutical Education in Sweden

The Apothecaries Society established the Royal Pharmaceutical Institute at Stockholm in 1837.⁴ It was reorganized in 1901 and took its present name at that time. The Institute is under the general supervision of a Board of Directors and has the immediate supervision of its Rector and Faculty Council.

Two types of pharmaceutical education are offered in Sweden. Admission to each program requires satisfactory completion of the maturity examination or a supplementary examination. In order to qualify for admission to these examinations a student must have completed what is approximately equivalent to elementary and secondary education in the United States. In some instances the student has completed one year more of secondary work than is customary in the United States.

Students planning to take the "candidate examination" in pharmacy must work for two years in a drug store as an "apotekselev", drug store pupil, under the direction of the store manager and of the Medical Board. The number and selection of applicants admitted each year for this role is controlled by the Medical Board. Following the two year apprenticeship these students pursue one year of academic work taking courses in chemistry, pharmaceutical chemistry, botany, pharmacognosy, pharmaceutical technology, pharmaceutical sterilization technique and pharmaceutical law. At the end of this period passing of the candidate examination at the Pharmaceutical Institute qualifies the student for employment in a drug store.

Those desiring more advanced training prepare for the "apotekarexamen", pharmaceutical examination. After passing the candidate examination this group of students must serve an additional

period of twelve months in a drug store. They then return to the Pharmaceutical Institute for two years during which courses in inorganic chemistry, analytical and organic chemistry, pharmacognosy, physics, pharmaceutical microbiology, pharmaceutical technology, pharmaceutical law, and the history of pharmacy are taken. The pharmaceutical examination is taken at the completion of this academic work.

Pharmaceutical Education in Denmark

Pharmacy in Denmark⁵ received official recognition by Royal Decree in December 1672. This decree established regulations for holding examinations in pharmacy under the joint jurisdiction of the Medical Faculty of the University of Copenhagen and the pharmaceutical chemists of the city. In 1892 an independent school of pharmacy was established under the direction of the Ministry of Education. New buildings were provided in 1941 with the school continuing under the supervision of the Ministry of Education.

To become a qualified pharmacist students must have passed the Danish School Leaving Examination and then serve not less than two and a half years as an apprentice in a pharmacy. The License Holder in charge of the pharmacy where the apprentice is serving is responsible for giving him both theoretical and practical instruction. This period of apprenticeship is concluded by taking the pharmaceutical assistant's examination, the passage of which entitles the individual to be employed in a Danish pharmacy. However, he cannot manage a pharmacy or dispensary. For this role only those who hold a special license which is awarded by Royal Decree may qualify. This license carries the title of "Apoteker" or License Holder. There are some 350 Apoketers in Denmark at the present time.

In order to qualify for the degree in pharmacy students who have passed the pharmaceutical assistant's examination must attend the graduate course at the Royal Danish School of Pharmacy in Copenhagen for at least two years and then take the examination for the degree. The curriculum of these two years somewhat parallels professional training in the United States schools but contains, in addition, much more chemistry.

The number of students admitted as apprentices is fixed each year by the Association of Danish License Holders and the Asso-

ciation of Danish Pharmacists. In recent years an average of 130 apprentices have been admitted each year while about 100 students are admitted annually to study for the degree in pharmacy. The Royal Danish School of Pharmacy has the right to confer the degree of Doctor of Pharmacy upon those who have completed the requirements for the degree in pharmacy with exceptionally high grades. Others may qualify for this degree by the presentation of a thesis and the passage of certain examinations.

Thus those associated with pharmacy in Denmark may fall into one of the following categories: pharmaceutical apprentice, pharmaceutical assistant, graduate in pharmacy, doctor of pharmacy, or license holder (*apoteker*).

Pharmaceutical Education in Switzerland

Pharmaceutical education in Switzerland⁶ is on a high scientific level. The present regulations concerning examinations pertaining to pharmacists were made effective in 1935. Although there are no degrees corresponding to the bachelor or master degrees in the United States, they have two State examinations known as the "Assistantship Examination" and the "Professional Examination." On passing the assistantship examination the candidate is permitted to serve as a pharmacist-assistant in all public and hospital pharmacies which are managed by a pharmacist with a Swiss diploma. Upon passing the professional examination the candidate becomes an "Apotheker" or pharmacist. If he then elects to continue scientific work, he may prepare a thesis requiring from one and a half to two years of laboratory work in one of the universities. He then takes a doctors examination which makes him a "Doctor of Pharmacie" or a "Doctor Rerum Scientiarum naturalium."

The five universities in Switzerland which have schools of pharmacy are: Pharmazeutische Anstalt at Basel, Pharmazeutische Institut at Berne, Ecole de Pharmacie at Lausanne, Ecole de Pharmacie at Geneva, and Pharmazeutische Institut E.T.H. at Zurich.

In order to qualify to study for the assistantship examination the student must have a high school diploma and have completed three semesters of university work in the natural sciences including chemistry, physics and botany. In addition he must pass a practical examination in qualitative and quantitative analysis and oral examinations in inorganic and organic chemistry, in physics, and in gen-

eral and pharmaceutical botany. After the completion of these prerequisites he must serve for not less than eighteen months as a practical helper under the direction of from one to three accredited pharmacists. During this period the apprentice is required to keep a certified journal of work done in the pharmacy. Before receiving certification as a pharmacist assistant he must pass a rather comprehensive examination.

To qualify for the professional examination the candidate must already have earned the pharmacist assistant certificate, have served in this role for not less than eighteen months in a public or hospital pharmacy in Switzerland, and have completed four semesters of academic work, three of which must have been taken in a Swiss university. This academic work involves didactic and laboratory courses in advanced chemistry, toxicology, pharmacognosy, pharmacy, foods, bacteriology, etc. The final professional examination consists of both oral and practical exercises.

Pharmaceutical Education in Spain

Changes in Spain during recent decades have tended to obscure the fact that higher education here has a longer history than in any other European country. During the Moorish domination, 711 to 1054, the courts of the kings became centers for scholars, libraries, and universities.

According to the Organic Law of Spanish Universities⁷ in 1943 higher education was placed under the control of the Ministry of National Education. Twelve university districts were established each of which is served by a university. In four of these universities, Barcelona, Granada, Madrid, and Santiago de Compostela, there are Faculties of Pharmacy.

The Spanish school system consists of five years of elementary work followed by seven years of secondary school. On completion of the secondary school program the student must pass a State Examination prepared each year by the Ministry of National Education. Completion of the secondary school course and passage of the National Examination is considered equivalent to the completion of one year of liberal arts college in the United States.

In order to qualify for the practice of pharmacy graduation from one of the aforementioned State Universities is required. The course in pharmacy requires five years for completion and prepares both

for the pharmaceutical profession and for several related fields. The content of the five year course contains the subjects normally found in United States schools and, in addition, such fields as applied geology, applied physico-chemistry, biochemistry, and bromatology.

The doctorate in pharmacy is required for university professorships. This degree may be obtained by not less than one additional year of work beyond the studies for the licentiate.

In 1945-46 the total enrollment in the pharmacy courses in the four universities was 3,219. Of 504 diplomas conferred that year in pharmacy 205 were granted to women.

Pharmaceutical Education in Egypt

In Egypt, Fouad I University, located in Cairo, has a School of Pharmacy which offers a three year course leading to the degree of Bachelor of Pharmacy. This school is under the jurisdiction of the Faculty of Medicine. In the pharmacy curriculum particular emphasis is placed upon the Egyptian Pharmacopoeia.

Pharmaceutical Education in the Republic of Lebanon

For a number of years the American University of Beirut, in the Republic of Lebanon, has operated a pharmacy school under the jurisdiction of the Medical Faculty.⁸ In 1952 this University graduated its first class which had completed a four year curriculum and received the Bachelor of Science Degree in Pharmacy. Prior to this a three year course led to the pharmaceutical chemist degree. The work of this institution is accredited by the University of the State of New York. In 1952 the total enrollment in the pharmacy courses was sixty-five.

Pharmaceutical Education in Yugoslavia

Courses in pharmacy are offered at the University of Belgrade and at the University of the Kingdom of Yugoslavia.⁹ The latter is located in Zagreb. For admission to the pharmacy program the applicant must have passed the senior course examination which is given after completion of the eight year secondary school curriculum. Completion of the four year pharmacy program and the subsequent four diploma examinations leads to the title of diploma-pharmacist. In addition to the usual pharmacy school subjects the Yugoslavian courses include food analysis, toxicology, medical biochemistry, and the science of poison gases. Perhaps the last named course reflects the

political atmosphere in which the people of this country have been living during recent times.

Those who hold the title of diploma-pharmacist may obtain the doctor of pharmacy degree by submitting and publically defending a dissertation based on research work covering not less than one year of intensive study and by passing the doctorate examination.

Pharmaceutical Education in Thailand

A Department of Pharmacy was established in the Royal College of Medicine at the Siriraj Hospital in 1913.¹⁰ The course initially required two years of academic study followed by one year of apprenticeship and culminated in the Ph.G. degree. In 1921 the Royal College of Medicine merged with Chulalongkorn University with Departments of Medicine and Pharmacy continued after the merger. The course in pharmacy was of rather meagre nature until 1941 when it was extended to four years leading to the B.Sc. degree. At this time the plan and personnel of the university were greatly expanded. The following year Chulalongkorn University merged with the University of Medical Science which was established by the government. This new university operates divisions of medicine, dentistry, pharmacy, and veterinary medicine. A graduate program was initiated in 1950 leading to the Master of Science and the Doctor of Science degrees.

Admission to the pharmacy curriculum is predicated upon the completion of twelve years of elementary and secondary education. The pharmacy curriculum is organized with a two year pre-pharmacy college course taken under the Faculty of Science followed by two years of professional work. Between 1946 and 1950 the average enrollment in the pharmacy division was forty-five with a ratio of men to women being one to seven. The average number of those receiving the B.Sc. degree in Pharmacy was thirty-eight between 1947 and 1950.

References

1. Ebaugh, C. D., Education in Nicaragua; Bulletin No. 6 (1947) United States Office of Education.
2. Ebaugh, C. D., Education in El Salvador; Bulletin No. 3 (1947) *ibid.*
3. Furbay, J. H., Education in Costa Rica; Bulletin No. 4 (1946) *ibid.*
4. Lindegren, A. M., Education in Spain; Bulletin No. 17 (1952) *ibid.*
5. Higher Education in Denmark, Danish Ministry of Education, Copenhagen, (1951).

6. Reglement die eidgenössischen Medizinalprüfungen; (Vom 22. Januar 1935). In translating this pamphlet appreciation is expressed to Dr. Fritz O. Laquer, Research Professor of Biochemistry, Temple University School of Pharmacy. Dr. Kurt Steiger, Kantonsapotheker, Zurich, Switzerland, also supplied helpful data concerning pharmaceutical education in Switzerland.
7. Ebaugh, C. D., Higher Education in Spain; College and University, (October 1949).
8. Catalogue of The American University of Beirut, (1952).
9. Turusienski, S. K., Education in Jugoslavia; Bulletin No. 6 (1939) United States Office of Education.
10. Catalogue of The University of Medical Science, Bangkok, Thailand (1951-52).

ARTHUR E. JAMES, *Chairman*

Report of the Committee on Pharmaceutical Research

This and other committees on Pharmaceutical Research have given much careful thought and have provided many suggestions in the form of annual reports as to how the status of research in the colleges and schools of pharmacy might be improved. Time will not permit the reiteration of all these reports. Those of us who have followed these reports are quite familiar with their contents. The problem of research in pharmacy is not a simple one. Many factors have a direct or an indirect effect upon research in pharmacy. Many of these have been alluded to in previous reports. To these factors the following should merit the careful attention of the AACP.

Deans should be appointed particularly to those institutions where research facilities and direction of research are available, on the basis of past performance and not on the basis of any "promising* possibilities of a given young man". This can often be a fatal mistake for a number of reasons. If the newly appointed young dean

*How many promising young men are elected President of the U. S., to the Supreme Court, Presidents of Universities, etc.?

does not prove capable, the college or school in question is *stuck* for a *very* long time and possibly inestimable hindrance to the advancement of pharmacy as a whole at that institution may result.

It is generally conceded that brilliance alone in a young man can by no means be a substitute for experience in any field of endeavor one might choose. It is only through *much* actual experience that one can acquire a thorough understanding of the requirements and problems in any given field.

How then is it possible, in most cases, to administer upon a given situation when the administrator's knowledge is limited? What are some of the duties and requirements of a dean that have a direct bearing upon the interests of the Committee on Pharmaceutical Research? The following are but a few citations:

1. To appoint qualified individuals to the staffs of schools or colleges of pharmacy where graduate instruction is given or may be given.

2. To determine, with the aid of the central administration, just how much research the institution is willing and able to support. Although half a loaf is better than none, nevertheless, the quality and quantity of research are definitely effected. In other cases where the loaf is even less than half, the situation is likened to the expression "just a teaser". Need we say more? I am afraid the latter case is applicable in many instances.

3. To be able to evaluate both qualitatively and quantitatively the research results of the staff members. These evaluations, if made correctly, provide a basis for making any necessary adjustments.

4. Be able to evaluate teaching loads so that where necessary, adjustments can be made to provide the incentive for research. (This Committee's report of last year dwelt at some length on this point, and reference to this report should prove helpful.)

5. A dean should be able to distinguish between a budget that is good for pharmacy and a budget that hinders pharmacy. Keeping a budget down is not necessarily a criteria of a good administrator.

The rest of this report shall consist primarily of excerpts of letters sent to the chairman. Rather than digest these letters and reword them, the chairman feels that quoting these excerpts is a more effective way of expressing the views of the committee members."

"I have had your letter of February 24 before me for several weeks, wondering what I might say. It seems that our report wasn't used for anything last year except for window dressing. If that is what is wanted again, I suggest that we reissue it, for it is by no means worn out or outmoded. If it was intended to stimulate toward constructive action, it was a complete failure, wouldn't you say?

"Maybe the trouble with too many reports is that they are too long. Perhaps a short pungent paragraph or two will do the trick. If that is so, then I would suggest we try something along the following line:

"If the AACP is interested in encouraging research in schools of pharmacy, the following simple rules are to be kept in mind:

(i) Be sure that you have competent members on your staff to do direct research.

(ii) When you have such a staff member, show him that your interest in research is genuine by:

(a) by not overburdening him with teaching duties

(b) providing him with room and facilities and the best equipment you can afford, even to the extent of straining the budget

(c) show an interest in his work; even if you do not understand what he is trying to do, be sympathetic with his efforts.

(d) encourage him to meet with others, e.g., attend professional and scientific meetings, to discuss his work with others interested in similar things, even to the extent of paying his expenses to conventions, etc.

(e) get assistance for him (not post doctorate graduate students) such as a research assistant; this will enable both the assistant and staff member to grow.

(iii) Eliminate petty jealousies such as are prone to crop up between departments of the same school of pharmacy and also among staff members of the same university.

"In other words, get the right man for the job, give him facilities and opportunities, encourage him and don't hamper him with petty personalities.

"Do I sound impatient? I'd like to use verbal dynamite."

"The improvement of the undergraduate curriculum still appears to me to be the starting point. For good research in pharmacy, we should give the undergraduate a sound fundamental training to enable him to do good work. Possibly it will be necessary to separate the retail course from the scientific. I think that is where our trouble lies—99% of our B.S. graduates are trained for the retail store, and the jump into good sound scientific research is just too much for the majority. Some make it, but as far as research is concerned, we are certainly starting with a handicap. Could our Committee urge that certain qualified schools (faculty, physical setup and money) implement a truly scientific curriculum on an experimental basis which has the sole purpose of producing pharmaceutical researchers? Such a curriculum would not be the six-year course—the commercial aspects of pharmacy should be entirely deleted with the first years devoted to fundamental courses in the physical, chemical and biological sciences and the latter years given over to the application of the principles of this early knowledge to pharmaceutical research. This would take a long time to show results, and I appreciate that there are many obstacles to such a course, but it does seem to be our best bet."

"The momentum which has been gathering for a Phar.D. suggests the beginning of the end of research in the pharmacy schools. In this connection, I quote from a letter I received from a man who has been both a registered pharmacist and an eminent biochemist: "More and more I become impressed with the fact that schools of pharmacy are at a cross roads. Within the next ten to twenty years they must either become trade schools or build up their professional status through research. It begins to look like the trade school boys are winning out."

"Despite the great difficulty of suggesting effective cures for many of our ills, I shall at least briefly outline a plan which could constitute a constructive move in the proper direction.

"A pharmaceutical organization, such as the AACP, should appoint a committee of two men to examine the curriculum of each division of pharmacy within an institution which offers the Ph.D. degree. In other words, if the University of X offers the Ph. D. in pharmaceutical chemistry, two men, one to come from a department of pharmaceutical chemistry in another institution and the other to come from a first-class *department of chemistry* of another institution should constitute the visiting committee. Likewise, a similar pair of men should investigate pharmacology, pharmacognosy, and pharmacy. The outside departmental representative in the last three cases might come from a botany department of a liberal arts college and a department of medicine of a medical school. (Possibly even a physical chemist might be a more fitting choice for practical pharmacy!)

"Each pair of investigators would be expected to examine the qualifications of graduate students and professors. The contents of theses, the curricula and facilities for research should be closely examined. A confidential report should then be sent to the Dean of the Graduate School and the President of the institution.

"A plan might be inaugurated by the AACP suggesting to the member schools that they allow such inspections, although no published accrediting would be made. However, a list of schools allowing such inspection might be published.

"Would such investigations solve the problems which exist? For example, how can better teachers be had? I believe the plan would be a big step in the right direction. Unqualified departments might be deterred in allowing the flow of poorly trained graduates. Those who are doing a good job might be encouraged to expand their programs. Administrators might be influenced to lighten the teaching loads of avid researchers, etc."

One of the tasks of the "Committee on Committees" was to evaluate the scope and functions of the various committees of the AACP. In addition it should make recommendations for the continuance or discontinuance of any existing committee. Opinions of

the members of this committee were polled, and excerpts of some of their replies are quoted as follows:

From George P. Hager

"The AACP is interested in the research programs in colleges of pharmacy. Since some schools have had active programs for a number of years while others are just starting or contemplating such programs, the AACP should be a clearing house for information necessary in formulating the best answers to inquiries and should act as an agency for encouraging the establishment and execution of good research programs, especially by disseminating information pertaining to such programs. These things become the functions of a committee on pharmaceutical research acting under the authority of the AACP." . . . "The annual perfunctory reading of a report, no matter how carefully it may be drawn, in itself accomplishes little or nothing. Accreditation proceedings may be effective if the burden is placed by the AACP on administrative heads as well as on the research director. It should be recognized that bricks cannot be made without straw. Some form of publication of recommendations, innovations and recognition may help in implementing the committee's suggestions. It seems to me that, in answer to point 2, the purposes of the committee are in some measure being frustrated by lack of proper implementation."

From Heber Youngken

"I firmly believe that our Standing Committee of the AACP should be continued. If this committee can do anything more each year through its annual report but to emphasize to administrative deans or directors of colleges of pharmacy the need to lighten undergraduate teaching loads and provide physical plants for the urgency of research, it will have accomplished a great deal. If it can lead these persons and, yes, faculties too, by the hand and show just what kind of research competition exists in other professional areas and academic areas for the support of such areas, then this too will be a contribution.

The objectives of the committee as stated by E. V. Lynn in his report found in the American Journal of Pharm. Education 11:471 (1947) might serve our purpose with the following modifications:

The objectives:

1. To appraise the research published annually by our member colleges to the extent of including in the yearly report a statement of the overall scope of research and the significant contribution to pharmacy and science which outstanding published research has made. (Each era of pharmaceutical research should be represented on the committee in order to do this adequately.)

2. To recommend administrative policies governing the actions of deans and faculties in the proper promotion and pursuit of research in our member colleges. (This should hit hard at reducing teaching loads and providing for necessary physical plants for operation.)

3. In collaboration with the Editor of the Amer. Jour. Pharm. Ed. to make certain that the yearly report be published and that a list of *research* publications to each member college similarly be published either in this journal or an equivalent journal.

4. To serve in an advisory capacity for the selection of suitable research papers to be presented annually before the Scientific Section meetings of the Amer. Pharm. Assoc. (The chairman and/or secretary of the latter Section might use this committee when in doubt about whether or not a paper submitted should be duly presented before the APhA Scientific Section.)

5. To serve as a nucleus for the selection of a representative to attend (to represent the ACP) regular scientific meetings throughout the country (of national scope) at which the AACCP should be represented. (I, for example, would like to attend Federated meetings or AAAS meetings as the delegate of the AACCP—and, to be facetious, with expenses paid by the AACCP.)"

From Walter Hartung

"But for Dean Kaufman's guidance, I suppose it might be stated that the Committee will be justified so long as it emphasizes before the AACCP and the public that progress in pharmaceutical research depends on the following:

- (a) Direction: In schools of pharmacy this means faculty which is
 - (i) adequately trained
 - (ii) enthusiastic
 - (iii) given opportunity, facilities and encouragement; that is, not burdened with heavy teaching load, poor and crowded facilities, or discouraged by unappreciative administrators or colleagues.
- (b) Inquiry:
 - (i) applied pharmaceutical research, or development
 - (ii) a wider base for investigation; i.e., the inclusion of all aspects of science which may and do help pharmacy
 - (iii) fundamental research. Pharmaceutically trained men have not lived up to their opportunities or responsibilities here.
- (c) Recruiting of research minded and competent personnel for
 - (i) teaching
 - (ii) industrial research and development
 - (iii) public health services
 - (iv) forensic pharmacy
- (d) Encouragement:
 - (i) stress always the value of sound academic research
 - (ii) discourage graduate programs where facilities and faculty cannot do justice there to; i.e., frown on lip service to the idea and where the institution only gets the prestige."

In conclusion, it is believed that this and preceding committees on pharmaceutical research have pointed out most of the ills associated with pharmaceutical research. It is further believed that if the AACP is genuinely interested in these reports, it will initiate the machinery necessary to improve the status of pharmaceutical research in the U.S.A.

OLE GISVOLD, *Chairman*

Report of the Committee on Graduate Study

Last year the Committee on Graduate Study, under the direction of Dr. Earl P. Guth, collected three volumes of data concerning the training, experience, teaching load, and publications of the staff members of Colleges of Pharmacy in the United States. From this material the Committee elected to base their 1952 report on the scientific and scholarly contributions of the pharmaceutical faculties. Since only 359 staff members and 53 colleges of pharmacy responded to the original questionnaire, it was the intention of the Committee to complete this survey during the past year and present a complete report at this meeting. Unfortunately, the pressure of other duties forced Dr. Guth to tender his resignation to President Daniels in March of this year. Consequently, the reports from the other 17 colleges of pharmacy were never obtained. Nevertheless, the Committee as now organized continued to evaluate the material collected last year and are pleased to submit a further report.

The questionnaires obtained from graduate teachers of pharmacy, pharmaceutical chemistry, pharmacognosy, and pharmacology were segregated according to the four disciplines and each group subdivided according to the number of years teaching experience of each individual. The personal record of each graduate instructor in each group was then analyzed for the number of M.S. and Ph.D. candidates under his personal supervision and for the number of

semester hours of teaching. The teaching load was expressed as undergraduate and graduate teaching. In order to correlate these data with those reported last year the number of publications was also shown.

The results obtained are summarized in tables I to IV. In view of the fact that this summary does not include *all* instructors concerned with Pharmaceutical education at the graduate level, it does not seem prudent to enlarge on the data presented in the tables. Nevertheless it is felt that this information will be of interest to graduate instructors in the various disciplines.

I wish to thank the members of the Committee for their help and encouragement during the past year.

EWART A. SWINYARD, *Chairman*

TEACHING LOADS AND PUBLICATIONS OF GRADUATE INSTRUCTORS

TABLE I—PHARMACY

	No. Graduate Students		Hours Teaching*		Publications 1940-1951
	M.S.	Ph.D.	Under-grad.	Grad.	
No. Years	0	0	10	2	0
Experience	6	0	4	7	3
	1	0	12	2	2
0-5	3	0	6	0	5
	1	0	10	2	9
	1	0	8	2	6
	1	0	9	0	2
	0	1	9	5	2
	3	3	4	5	2
	2	0	7	3	3
	4	0	5	5	8
6-10	1	2	2	3	8
	5	0	6	3	2
	1	1	11	5	2
	2	1	6	6	7
	1	0	12	3	0
11-15	1	0	2	2	8
	3	0	9	3	10

Reports

625

	2	0	4	6	6
	1	0	8	5	0
	3	5	5	4	14
	0	1	6	5	11
	2	4	4	2	10
	4	1	5	4	3
	3	1	12	3	24
	0	0	5	2	22
	0	1	10	3	6
	4	0	5	3	31
16-20	1	0	3	3	0
	2	0	8	3	2
	3	4	10	6	17
	6	0	2	0	14
21-25	2	2	6	3	31
	1	0	2	2	6
	4	4	5	4	11
	0	7	8	1	3
	0	2	5	9	14
26-30	3	0	2	3	30
	0	0	8	1	7
	1	0	15	0	2
	0	7	4	0	0
31 and over	9	0	3	4	4
	0	2	6	4	41
	0	4	9	2	16

TEACHING LOADS AND PUBLICATIONS OF GRADUATE
INSTRUCTORS

TABLE II—PHARMACEUTICAL CHEMISTRY

	No. Graduate Students		Hours Teaching*		Publications 1940-1951
	M.S.	Ph.D.	Under-grad.	Grad.	
No. Years	1	3	3	4	2
Experience	1	0	12	0	5
	0	1	5	2	3
0-5	0	2	5	5	0
	5	0	5	1	5

6-10	1	0	10	5	3
	1	4	0	8	60
	1	1	3	3	16
	4	3	6	3	6
	1	0	4	2	5
	7	3	9	5	13
	1	0	12	3	0
	1	0	6	2	9
	0	3	5	11	20
	2	0	11	3	8
11-15	3	3	8	8	6
	0	0	5	3	20
	0	1	8	4	4
	1	0	10	5	5
	2	5	3	3	28
	3	0	9	8	8
	1	2	4	3	55
	0	0	6	2	4
	1	0	10	3	6
	4	1	4	6	4
	1	11	2	3	9
	1	1	7	7	8
	1	0	9	5	12
16-20	2	0	6	1	3
	3	8	3	4	33
	1	2	4	3	16
	0	4	6	6	21
	1	1	9	3	27
21-25	3	0	6	4	8
	3	0	9	6	4
	0	0	5	2	98
	1	2	6	3	20
	0	0	15	3	4
	2	2	5	8	27
26-30	7	0	6	7	9
	4	1	12	2	14
	0	13	0	0	38
	4	2	3	3	32
	4	1	0	1	103
	2	0	6	3	5
	4	3	4	12	22
31 and over	0	4	6	7	51

TEACHING LOADS AND PUBLICATIONS OF GRADUATE INSTRUCTORS

TABLE III—PHARMACOGNOSY

	No. Graduate Students		Hours Teaching*		Publications
	M.S.	Ph.D.	Under-grad.	Grad.	1940-1951
No. Years	2	0	10	4	12
Experience	0	0	7	2	6
0-5	1	0	16	4	1
6-10	2	1	6	5	0
	2	3	5	4	27
11-15	0	2	15	4	5
	2	0	14	0	6
	4	1	3	4	33
	2	0	15	10	3
16-20	0	1	5	2	27
21-25	1	0	7	3	19
26-30	2	0	12	3	11
	0	3	7	5	6
	0	0	16	10	0
	1	0	5	3	3
31 and over	3	3	2	5	61
	1	1	0	8	26

TEACHING LOADS AND PUBLICATIONS OF GRADUATE INSTRUCTORS

TABLE IV—PHARMACOLOGY

	No. Graduate Students		Hours Teaching*		Publications
	M.S.	Ph.D.	Under-grad.	Grad.	1940-1951
No. Years	2	2	8	4	3
Experience	0	0	7	3	0
0-5	0	0	6	6	4
	4	0	9	1	13
	1	0	9	5	10
	3	1	8	4	3
	2	0	12	0	13

	7	0	1	2	2
	0	1	1	2	3
6-10	2	3	12	6	13
	3	0	4	4	2
	4	1	3	4	42
11-15	1	0	18	8	5
	3	1	6	6	43
	2	0	13	3	17
	1	3	5	5	2
	3	0	6	5	4
	0	1	6	3	18
	0	2	12	4	59
16-20	----	----	----	----	----
21-25	2	0	12	4	1
	1	4	7	10	9
	0	2	4	3	6
26-30	7	9	4	4	18
31 and over	1	3	2	0	13
	0	0	4	4	11

Report of the Committee on Curriculum

The report of the Curriculum Committee this year consists of four parts: (1) The report of the Sub-Committee on Hospital Pharmacy, (2) the use of the monograph, *The Pharmaceutical Curriculum*, by the schools, (3) the pre-pharmacy year, and (4) a note calling attention to a course entitled *Communications*.

1. The Report of the Sub-Committee on Hospital Pharmacy

In conformity with a resolution proposed by the Executive Committee adopted by the Association August 22, 1952 concerning training in hospital pharmacy and which proposed that this matter be

*Semester hours.

studied jointly by the Division of Hospital Pharmacy of the American Pharmaceutical Association; the Committee on Minimum Standards of the American Society of Hospital Pharmacists; and the American Association of Colleges of Pharmacy; appointments were made by President Daniels of individuals broadly representative of the three organizations to a Sub-Committee of the Curriculum Committee. A meeting of this Sub-Committee was held March 30-31 in Washington, D. C., to consider the problem, on which the Association had commented in the same resolution in the following language:

"Be it further resolved that this Association feels that training in hospital pharmacy not complemented with or accompanied by further academic training is not in the best interest of the future development of hospital pharmacy and the profession."

Prior to the meeting of the Sub-Committee, a panel discussion at the AAAS meeting resulted in the following action referred to the Committee for implementation:

"Secretary-Treasurer Zopf represented the Association at the Pharmacy Subsection of the American Association for the Advancement of Science meeting in St. Louis, December 29-30. He reported that he participated in a panel discussion on minimum standards for pharmacy internships in hospitals. It was his opinion that there was unanimity on the part of those participating in the panel as to the desirability of having the hospital pharmacy internship associated with an academic program. He suggested that the Subcommittee on Hospital Pharmacy of the Committee on Curriculum of this Association develop a general outline for such a curriculum. The efforts of the American Society of Hospital Pharmacists in establishing standards for hospital pharmacy internships were discussed, but it was recommended by the Secretary-Treasurer that the Association outline an academic program which would be acceptable to the graduate colleges. Only by having a program which will have graduate recognition will it be possible to increase the standing of this division of pharmacy. There was some discussion at the AAAS meeting relative to the feasibility of requiring the hospital pharmacist in charge of the actual internship program to hold membership on the staff of the college of pharmacy. This is to be encouraged and is currently being practiced by several of the member schools of this Association."²

"Moved, seconded and passed:

1. Report of the Committee on Resolutions. Res. No. 13, American Journal of Pharmaceutical Education Vol. XVI, No. 4, Oct. 1952, p. 673.
2. Minutes of the Interim Meeting of the Executive Committee, Jan. 22, 23, 1953, Item 13, Am. J. Ph. Ed., Vol. XVII, No. 1, Jan. 1953, p. 121.

"It is the opinion of the Executive Committee that the academic portion of the hospital pharmacy internships program should be on a graduate level and furthermore that the minimum number of academic credits should satisfy the minimum requirements for a Master of Science degree."

The discussions of the Sub-Committee indicated a high degree of unanimity, as reported by Dean Zopf, that programs consisting of a year (30 sem. hrs.) of academic work plus an internship constituted the most desirable arrangement for producing the best type of hospital pharmacists, the leaders, the ones best equipped to fill the most responsible positions. Men and women with such training are now doing outstanding work and are in demand. Several universities are now offering such courses in their Graduate Schools leading to the Masters Degree.

Considerable agreements also existed as to the functions of the hospital pharmacist³, the objectives of the internship experience⁴, and the content of the courses designed to develop the skills and attitudes necessary to fulfill the functions. It was recognized that the undergraduate course develops the basic core of techniques and skills essential in the practice of professional pharmacy, whether in a hospital or a retail establishment, and that the courses needed here were ones specifically designed to equip the pharmacist to perform more efficiently in the hospital environment.

In this connection it was mentioned that the hospital pharmacist works in closer cooperation with physicians, nurses, and other professional people, with the therapeutics committee of the hospital, and has a greater need of a knowledge of principles of the organization as applied to hospitals, than pharmacists in other areas of pharmacy. For this reason it was felt that perhaps the course to be listed first should be Hospital Pharmacy Administration. A syllabus of this course has been circularized and is probably well enough known to render unnecessary an extended description here. The suggested courses in the professional areas are as follows:

PROFESSIONAL

Hospital Pharmacy Administration

Manufacturing—(Semi-plant, pilot-plant or hospital scale).

Non-Sterile

Sterile (Parenteral Fluids)

3. From the Guide to application of Minimum Standard for Pharmacies in Hospitals.

4. From the Report of the Curriculum Committee, 1949.

Special Problems in Pharmacy Technology
Pharmaceutical Literature
History of Pharmacy
Seminar
Pharmaceutical Research and Thesis.

Of these professional courses the first two were considered as having a high priority.

Standard fundamental or basic non-professional courses in the following areas are also suggested:

NON-PROFESSIONAL

Bio Chemistry
Physical Chemistry
Colloid Chemistry
Advanced Pharmacology
Chemistry of Organic Medicinal Products (over and above the undergraduate)
Bio Assay
Bacteriology and Serology.

The Advanced Pharmacology course discussed was of a level such that an undergraduate course in Pharmacology without a laboratory would not serve as a prerequisite for it.

Other courses mentioned, less specifically, as possibilities, included Biostatistics, Instrumentation, Public Health, and an orientation course in Hospital Administration.

The course should consist of one year of academic work followed by a year of internship, or two years of academic work and internship experience taken concurrently. As to the internship portion, it was felt that the person to whom the interns are directly responsible should be a hospital pharmacist with a knowledge of educational objectives and methods.

Contrasted with the high degree of agreement on the above combined academic-internship program, the discussion indicated the existence of considerable confusion regarding other types of programs. The simplest way for a graduate to become a hospital pharmacist is for him to accept a position as pharmacist in a hospital as soon as he has been licensed to practice. Therefore, hospital pharmacists are being created every day by hospitals acquiring pharmacy graduates with every permutation and combination of academic preparation and experimental training from the high level combination discussed above, down to the complete absence of both.

A hospital, unable to find a highly trained and experienced hospital pharmacist may have to take one somewhat less qualified. The hospital may accept one from those with some, but not quite adequate advanced training and experience, with no experience but varying amounts of advanced training, with no advanced training but varying amounts of experience, or with neither advanced training or experience. There is no legal barrier to prevent the hospital from accepting a recent graduate, and quite possibly one whose record does not even include an undergraduate orientation course in hospital pharmacy.

Some of the miscellaneous and conflicting factors that cloud the issue may be listed briefly as follows:

1. There are 73 schools of pharmacy, and over 6600 hospitals in continental United States.
2. About 4000 students graduate from schools of pharmacy each year, and some 175 to 200 of these become hospital pharmacists.
3. All of the schools of pharmacy are not in position to offer a hospital pharmacy program such as that discussed above.
4. If the schools were all able to handle even say, two students in such a course, where could 150 interns be placed?
5. All schools do not have hospital connections.
6. Most hospitals do not have school connections.
7. There is the possibility that if the situation is not controlled in some way hospital pharmacy courses may be offered by medical schools and/or by some schools of public health in some medical schools and/or by some schools of public health in universities where there are no schools of pharmacy.
8. There is a suspicion in the minds of many people that an internship program is a device to secure quality service at low cost. In some cases this suspicion is rapidly becoming a conviction.

One attempt to bring some uniformity into the picture is the plan whereby hospitals will be accepted for pharmacy internship programs by the Division of Hospital Pharmacy of the APhA through a joint accrediting committee if the hospitals meet the proposed minimum standards for such internships. These minimum standards were prepared by a committee of the American Society of Hospital Pharmacists. While this plan has been criticized in that it does not require the internship experience to be complemented with or accompanied by further academic training, it can also be said that it establishes a workable controlled experience program in an area where

neither experience nor further academic training is required, both would be useful, and either one would be an improvement over the *status quo*.

Actually, the plan approaches the problem on the pattern of the medical internship program. Here the school grants the diploma, the hospital a certificate of internship, and the hospitals are accredited for internship programs by registration by the Council on Medical Education and Hospitals and approved by the Joint Commission on Accreditation of Hospitals (sponsored by the American Medical Association and four other cooperating organizations, namely: the American Hospital Association, the American College of Physicians, the American College of Surgeons, and the Canadian Medical Association). Several additional points which are pertinent may be listed here:

1. There is also the suspicion in the minds of many people that the internships in medicine are also a device to secure quality service at low cost for the hospital. Experience here, however, indicates that many hospitals paying low stipends but offering excellent supervised experience fill their intern rosters regularly, while others, despite superb physical plants and stipends are not always successful in obtaining an intern staff.⁵
2. The advisory Committee on Internships of the Council on Medical Education and Hospitals of the AMA recognized that "excellent internship experience is available in hospitals far from medical schools or urban centers. We took our first concern to be the nature of the internship experience, independent of auspices."⁶
3. Experience, during the hospital pharmacy internship, is under one or more practitioners or preceptors. This again follows the pattern of the medical internship, but also is in line with all previous experience requirements in pharmacy. Experience requirements in retail pharmacy are served under a retail pharmacist, and certified to the State Board. Historically the Schools of Pharmacy have not been concerned with the experience requirements.

Conclusion

Agreement was reached as to the overall types of advanced courses considered to be most beneficial for a graduate program in

5. J.A.M.A. Vol. 151, No. 6, p. 500. Report of the Advisory Committee on Internship to the Council on Medical Education and Hospitals of the A.M.A.

6. Ibid.

hospital pharmacy or an elective sequence in an extended undergraduate program.

Concerning the non-academic internship, two suggestions grew out of the meeting:

1. That a panel discussion on the problem, particularly on the control of the "now academic" internship area of the problem, be included in the program of the annual meeting at Salt Lake City.
2. That an arrangement be made whereby the minimum standards would be considered by the AACP, after which an internship program in any hospital would be approved by a School of Pharmacy and then by the Division of Hospital Pharmacy.

One additional suggestion was added by the Curriculum Committee, and that is that if additional consideration is to be given to the non-academic internship, that a special committee be appointed as this is not a curriculum problem. This suggestion is in line with the original motion of the Executive Committee passed at the meeting at which the first resolution was discussed and drafted.⁷

STEPHEN WILSON, *Chairman*

2. The Use of the Monograph, The Pharmaceutical Curriculum by the Schools

In his Installation Address at the Philadelphia meeting last year President Daniels recommended "that the committee on curriculum obtain a statement from each member school and college as to what use its faculty is making of the report. These statements should be obtained near the end of the present academic year and should be summarized and presented in a report to this Association."⁸

In line with this recommendation a letter was sent to the Dean of each of the 75 member schools and colleges "requesting whatever statement you would care to make as to:

1. How you and your faculty have proceeded with this report
2. Your evaluation of the report
3. The effects of the report and your considerations of it upon the instruction in your school
4. Any other matters you might care to mention."

7. Minutes of the Executive Committee meeting of Aug. 16, 1952, *Am. J. of Ph. Ed.* Vol. XVII, No. 1, p. 115, Jan 1953, but issued in April, after the sub-committee had met.

8. All members attended the meeting of the sub-committee held March 30, 31 in Washington, D. C. Dr. Lloyd E. Blanch, Associate Chief for Education in the Health Professions, Office of Education, Federal Security Agency, also attended some of the sessions and took part in the discussions. The sub-committees personnel was Robert P. Fischelis, Don E. Franke, W. Arthur Purdum, Donald Skauen, Louis C. Zopf, Stephen Wilson, Chairman.

In response to this, and one follow-up letter, 65 replies were received from as many schools and colleges. The Committee wishes to thank the deans who responded to this request for information, many of them in detail, and at a busy time in the academic year. The response was very gratifying, and is greatly appreciated.

An analysis of the information received from the member schools and colleges indicates that the monograph was widely distributed and extensively read. Two copies were distributed to the representative (usually the dean) of each member school and college at the meeting in Philadelphia. It is true at the same meeting a number of schools were elected to membership in the Association after the distribution of the book, but there is reason to believe that all of these new member schools have secured copies since the distribution. Well over a majority of the deans indicated that additional copies had been secured and distributed to every member of the faculty. Most of the other replies specified that copies had been supplied to the permanent members of the faculty, to the major members of the faculty, to the heads of departments, and to the members of the curriculum committee of the faculty. Several of the letters stated that additional copies had been made available through the library and the dean's office. It would appear that the monograph has been read by a very great proportion of its potential audience.

The methods of studying the monograph show an interesting degree of variety. In many instances the letters pointed out that the faculty members had been directed to read or on their own initiative had read the complete report and then re-read the sections dealing with their special area. This is important in getting the overall picture and in establishing proper perspective. A large number of schools have had a curriculum committee considering the report, and in many instances the committee is simultaneously reviewing the curriculum of the school. In most instances, however, the technique appears to be to have discussions of the curriculum problems of the different areas in successive meetings of the faculty. One letter specifies that such meetings were held weekly. In most of these meetings the discussion seems to have been led by the head of the department of the area under discussion. In many of the meetings the members of the University faculty who taught pharmacy students

9. *American Journal of Pharmaceutical Education*, Vol. XVII, no. 1, p. 156, January 1953.

in basic courses were included in the discussions. One college devoted six periods of a scheduled graduate seminar to discussing six areas of the monograph. Members of the faculty and graduate students took part in the discussions.

The results of all these meetings includes revised curriculums in eight schools; curricular changes completed, eight schools; curricular changes recommended but not yet adopted, six schools; changes in the planning stage, nine schools; curriculum reviewed or under review, five schools; curriculum discussed, under discussion or study, twelve schools. This makes a total of 48 schools reporting curriculum study activity in the past year. In addition, twelve schools indicated that curriculum changes had been made just prior to the distribution of the monograph, and that these changes had been based upon studies of the preliminary reports of the consultative committees. There is also reason to believe that curriculum changes made in some schools were not mentioned in the letters.

The extent of the interest in course content and in teaching methods was not apparent from the letters received in response to the inquiry. However, a number of the letters did comment that some changes had been made to eliminate duplication, to improve the course sequence, and to change the emphasis in some areas. This indeed is in the right direction, as these were the main points of criticism uncovered by The Pharmaceutical Survey.

As to the evaluation of the monograph and the effects of the discussion of it, again a variety of answers were received. A few quotations may serve to illustrate this:

1. "Because of this report we have presented to our administration a proposal to adopt a curriculum based on two years of pre-pharmacy and three years of professional work. This curriculum is expected to be put into effect on an optional basis beginning with September 1953. In 1955 we would like for it to be the required curriculum for all students. We consider the report to be of great assistance from an instructional standpoint. It has helped us to determine more adequately course content with due emphasis on proper sequence."
2. "My personal view is that the report is excellent and deserves much thoughtful study with a view toward profiting from the tremendous amount of work which went into its formulation. To date our only use of it has been to study its contents."

3. In accordance with your request, I am happy to say that we, at this institution, are using **The Pharmaceutical Curriculum** almost like a Bible. It is always at our finger tips and we are constantly referring to it. A question never arises that we don't ask, "What does the **Curriculum** give about it?"

"We have used this book as a guide to fabricate our educational objectives. We have reviewed our entire program, not only from the standpoint of course content, but also credit hours, and compared it to **The Pharmaceutical Curriculum**. At the present time our Syllabus Committee is writing its recommendations to submit to the faculty on how we may improve our program.

"I believe the Monograph has been of tremendous value to our instructors. It has not only outlined what should be in the courses but also has defined them on an impartial basis. This has helped to coordinate the courses to reduce needless duplication."

To say the least, we are more than glad to have **The Pharmaceutical Curriculum**."

4. "Since the report contains certain suggestions that might not be sound pedagogy I believe our faculty would like to proceed slowly with some of the recommendations that are given therein."
5. "Our Faculty has read and discussed with interest the report in fact, the whole basis for our curriculum, as well as course content, are from the conclusions as drawn from the report. It is our opinion that studies of this sort are invaluable to schools. The only regret that we have is the report is probably 25 years ahead of the thinking and ideas of some of our educators and associates whose positive actions are vitally necessary for the implementation of such a program."
6. "We have made no attempt to evaluate the curriculum report since in most respects our particular program is advanced over your report of the pharmaceutical curriculum."
7. "The publication of this Monograph as a guide is in my opinion without question one of the most important contributions to pharmaceutical education in general ever offered. It points the way, if properly supplemented and used by a competent faculty, to finally putting the courses in the pharmaceutical field on par with those of other sciences. I am particularly impressed with the recommendations of the courses, sequence and course content as recommended in pharmacy and pharmacy administration. The courses in the chemical and biological sciences do not constitute any radical departure from past practice but recognize what is generally accepted as good academic practice in these fields."

These few illustrations indicate the extremes of the variations in the letters. There also appears to be a difference of opinion regarding the relative importance of the philosophy and the curricular details in the monograph.

8. "Although not all of the positive suggestions made in this Monograph are acceptable to some of the individuals who are helping to plan the new college program, I am certain that the underlying philosophy is definitely making itself felt. One cannot read far in any section of the book without developing a sense of constructive thinking.

This report embodies the whole meat of The Pharmaceutical Survey so far as educators are concerned. I do not see how it can fail to have an enormous influence on pharmaceutical education."

9. "It is my personal feeling that the concrete information given in the Pharmaceutical Syllabus is very much more helpful than the philosophical discussion of the later work. We make considerable use of the syllabus outlines and during the past year have received requests for specific outlines from two different service departments of this University."
10. "I believe that the most noteworthy long-range effect of the Monograph is that it brings forcibly to faculty members, students, and to the profession as a whole the basic philosophy of the objectives of modern pharmaceutical education. Without any overtones of apology for boldness or the slightest acquiescence to trade school concepts, the report clearly and definitely sets down the principles in detail of a sound education for pharmacy. It is an educational plan which recognizes that a pharmacist is primarily a member of society with obligations and responsibilities as a citizen but who is expected to make special contributions to the public's health in his day-to-day efforts to make a living."
11. "With the near completion of the cycle of teachers' seminars I believe it might be helpful to the colleges if a **suggested** syllabus could be prepared by the same committee for use as a **guide** in the further development of course content."
12. "The report has been most helpful to the Dean of the College of Pharmacy in putting across the purposes and objectives of the pharmaceutical curriculum in departments that heretofore have had rather set ideas as to what should be taught. The sequential outline of courses and discussions have been very enlightening to the total University Administration, and this has resulted in a better understanding of Pharmaceutical Education. The report has served as a good source of pharmaceutical education for many university administrators."

13. "We feel that that the report as a beginning of a continuous program of discussion and improvement of our curriculum is excellent, but as a terminal report I would consider it much less valuable.

"We suggest that this report not be given the pseudo-official status of the previous syllabi published but left in the realm of a guide. This will enable us to capitalize upon the excellent advice it contains without concerning ourselves with the serious criticism which it would engender if it were given official status."

The best answer to the above quotation is probably to quote from the monograph itself:

"A curriculum of a professional college is an instrument which should properly be devised by the faculty that uses it, with due regard to the needs of the profession and the public. No competent faculty is likely to accept wholeheartedly a curriculum which is imposed upon it by some outside agency, or even by its dean. To be sure, a wise faculty will seek assistance from any and all sources where it is available, but the final responsibility for designing and using a curriculum must rest with the teaching staff, both collectively and individually.

"This report on the pharmaceutical curriculum has been prepared in the hope that it will be helpful to the various faculties as they revise their courses of study. It is not intended as a chart that will be adopted line for line or subject by subject. The hope is, however, that faculties will find that the report merits careful study and that from such study they may find suggestions they can use. The authors also entertain the hope that persons outside pharmaceutical faculties who are interested in, and concerned with, the status and progress of professional education in pharmacy will find in the report information, conclusions, and suggestions that will serve their purposes."

As a conclusion to this section of the report on the use of the monograph, *The Pharmaceutical Curriculum*, it may be stated that the letters from the deans constitute an impressive document to the fact that the faculties of the schools are using the monograph to a great extent. The letters, when taken in conjunction with the catalogues show that even before the report was distributed in August 1953 a number of the schools were anticipating the recommendations through the use of the preliminary reports of the consultative committees, through attending and following closely the AACP Seminars in the several areas, and through the contacts which the members of the various faculties had with the work as it progressed. There is evidence of much curricular activity throughout the 1952-53 session.

Quite possibly more attention has been given by more people to the study of the curriculum and the improvement of course content and teaching technics than in any previous similar period of time. We may well be proud of the role of this Association in the instigation, promotion, development, and arrangements for The Pharmaceutical Survey, and for the active part taken in it by the personnel of the schools, particularly in the curricular studies. Also we may well be proud that the activity did not stop with the conclusion of The Survey, but is still going on as a continuing study of the challenging problems of our professional curriculum.

3. The Pre-Pharmacy Year

The record of this Association over the past decade shows an almost unanimous vote (at the Columbus meeting in 1943) against a proposal to shorten the Pharmacy course to two calendar years. A general dissatisfaction with the wartime accelerated program was also indicated. While there was no national meeting in 1945, a questionnaire poll in that year definitely indicated the conviction of the schools that any move to lengthen the Pharmacy course should await the results of The Pharmaceutical Survey, and an adequate period of experimentation to exhaust the possibilities of the four-year course. In 1950 a proposal to extend the course to six years was tabled. In 1951 a proposal to extend the course to five years attained a simple majority, but failed to get the two-thirds affirmative vote required for adoption. In 1952 a proposal to permit the five year course on an optional basis with a professional degree was tabled.

The conviction that additional experimentation with the four-year course would yield results seems to be giving way gradually to a feeling that no amount of such experimentation is going to result in a satisfactory program. There is some evidence of this feeling in the letters pertaining to the use of the monograph received from the schools.

The following two quotations illustrate the more definite statements referring to it:

"We have gone as far as we can to bring our four-year curriculum into conformity with current views."

"We have recently made certain revisions in our curriculum with a view to strengthening it and giving it somewhat better sequence. Many of the changes made are suggested in the monograph and it is my opinion that we have made all the improve-

ments possible, working under the limitation imposed by the four-year program.

"I think it is obvious to any educator who has given careful study to the problem that only by the extension of the time factor can the curriculum be placed on a fundamentally sound basis. I think there are few educators who will dispute this. Whether it is economically feasible to lengthen the time required is a matter of debate, as is the propriety of permitting economic considerations to influence our judgment of what is educationally sound practice."

In the meantime, the idea of maintaining Pharmacy on a four-year basis and at the same time securing many of the advantages of an extended curriculum by the requirement of a pre-pharmacy year seems to have grown to some extent. The Committee is in receipt of letters and telegrams urging the introduction of one-year and two-year pre-pharmacy requirements. The Committee is also in receipt of communications indicating the futility of introducing proposals which have no chance of being approved.

Nevertheless the Committee has as its primary function recommendations for the continuing improvement of the curriculum as offered by member colleges. At the meeting of the Committee it was the unanimous opinion of the members that no significant improvement in the curriculum can be accomplished without increasing the time required by the student. The Committee members were also unanimous in their opinion that the undergraduate course must be sound, solid, and secure. It is the only preparation most practitioners receive, and it should be of such calibre as to enable them to keep abreast of the advances in the profession after graduation. If the course is inadequate this will not be possible. A graduate of an inadequate program may turn to graduate work in order to complete his mastery of his profession, only to find himself handicapped there also because his preparation is weak.

The tendency to continue indefinitely the attempts to improve the curriculum within the four-year time limit seems to be tied up with the idea that this can be accomplished by eliminating the dead-wood from the curriculum. This criticism usually comes from practicing pharmacists rather than educators, and is usually stated somewhat as follows:

"If all the obsolete material were eliminated from the curriculum, there would be adequate time to teach the more modern material, such as antibiotics, the improved biologicals, the

sulfa drugs, the antihistamines, silica and alumina gels, chemical and biological insecticides, endocrine products, and vitamins."

Those who voice this criticism, while usually very definite that a great deal could be eliminated from the curriculum, are equally vague as to what should be included relative to the more modern material. It is, of course, unnecessary to point out here that it is hardly possible to improve a curriculum by continuously deleting material. New material must be incorporated. However, all of the items just mentioned above are the results of the improvements in and of the development of new concepts in the basic sciences as well as in Pharmacy. Since the advent of the four-year course the amount of new material, which has been of necessity, incorporated into the curriculum is indeed staggering.

With the development of every new type of medication there is a large amount of basic theoretical material necessary for a sound understanding of these new products. Much of this fundamental material belongs in the basic courses. The amount of material resulting from developments in the basic sciences of biology, chemistry and physics upon which pharmacy is based have been so prodigious since the advent of the four-year course in pharmacy that it is a wonder that they can be adequately taught and have any time at all left for consideration of the professional courses.

It may perhaps be argued that pharmacy as presently practiced is adequately done with a superficial knowledge of new products and without complete grounding in the sound basic subject material which lies beneath them. The practicing pharmacist is apt to be satisfied if his sales personnel has but a superficial knowledge of these new products which are sold to the public. He also, all too frequently, fails to distinguish an employee who is a pharmacy student from the regular sales personnel. Since the student is doing sales work it seems to follow that he needs no more basic information on these products than the salesperson. This is indeed a serious fallacy, and may stem, in part, from the fact that the employer, who may have graduated twenty-five, thirty, or more years ago, has not kept up with the advances throughout the years, and may have only a superficial understanding of the new products himself.

It is our responsibility as educators, as Pharmacy teachers, to equip the graduates of each class with a sound foundation of principles as well as to train them in their application in order that they

may be able to keep pace with developments after their graduation and during the twenty, thirty, or forty years during which they will be practicing pharmacy.

What this amounts to is a recognition of the fact that pharmacy students must not only be trained to practice pharmacy immediately upon graduation but they must be sufficiently well grounded to be able to keep pace with the rapid developments which will take place during their tenure in the profession. No one can foresee at the present time where these developments may lead. The only possible preparation which can be at all adequate would be a thorough grounding in basic principles.

This places a heavy responsibility upon the teachers of Pharmacy. It is the duty of the Pharmacy teachers to develop and maintain professional courses of an applied nature at a high level, fully abreast of the latest developments in the profession and also fully related to the latest advances in the basic sciences. That this is a problem of no mean proportions is indicated by the fact that in a few schools some thought has been given to having the capstone course of dispensing pharmacy taught on a seminar basis with the responsibility shared by the major staff.

There is one additional thought reflected in some of the letters from the schools which perhaps should be mentioned here. There seems to be the thought in the back of the minds of some pharmacists that the picture of the pharmacist and his functions in society drawn verbally by The Pharmaceutical Survey, and upon which the educational objectives were based, is impractical, is a picture of Pharmacy many years in the future, in the year 2000, and in the next century, and that therefore we do not need to do anything about it now. In that connection it should be pointed out that the tenure of active participation in the field of pharmacy frequently runs over forty and even over fifty years. Therefore some of our 1953 graduates, and a very definite proportion of the graduates a decade hence, or say the graduates of the class of 1965, will be practicing their profession in the year 2000 and into the next century. In fact they will probably be in a position of major influence in the field of pharmacy at that time. The problem of the type of curriculum for these graduates then is not impractical, and becomes a problem for today, not one to be put off as belonging in the next century. Teachers are the real

realists. We are the servants of reality, not the immediate, present and expedient reality, but the long range fundamental and objective reality. Our responsibility is to the young, and through them to the future—a future which it is our duty to envisage, but which we may not share. What is more practical for a lifetime tenure in a profession than a sound and solid foundation in the sciences which underlie that profession, and in liberal arts, social studies, and citizenship which constitute its cornerstone?

The Committee feels that there is sufficient interest in a pre-pharmacy year that the Association may wish to consider a proposal, in which case it is the Committee's duty to draft the proposal and also the wording of the necessary changes in the By-laws. The Committee listed the objectives to be born in mind and undertook to draft a proposal which would (1) establish a pre-pharmacy requirement; (2) insure the greatest possible freedom for the member schools and colleges to work out their own arrangements of the various plans which have been discussed, such as the 0 - 5, the 1 - 4, and the 2 - 3; (3) suggest an effective date which would give adequate notice and yet be early enough to be effective; and (4) keep the changes in the By-laws as simple as possible. The Committee recommends the following:

Whereas Under a pre-pharmacy requirement a number of advantages would accrue to the schools and colleges and to the Pharmacy students:

1. Relieve the pharmacy students of the necessity of carrying excessive credit loads.
2. Obviate the present frequent necessity for giving prerequisite material concurrently with the subject matter for which it is prerequisite.
3. Leave room for elective courses in professional or general education, in training for citizenship or in the art of living.
4. Provide for better course sequence.
5. Provide more mature students in the professional areas.
6. Eliminate the great variation in academic levels of students in the same class.
7. Insure more homogeneous pharmacy classes at a significantly higher level.
8. Make possible a better screening of students.
9. Provide a more adequate and just basis for the selection of students.

10. Minimize the processing of some students after enrollment in pharmacy.
11. Provide opportunities to enrich the professional courses.
12. Provide opportunities to raise the level of the professional courses so that they could lead to graduate work in any of the five areas of the pharmaceutical curriculum.
13. In general make it possible to eliminate many criticisms of the pharmacy curriculum uncovered by The Survey.

Whereas these advantages could all be accomplished without placing any greater burden on the faculties in the professional areas (There would, however, be an increased load placed upon the areas of basic science and general education.)

Be It Resolved that Section 7 of the By-laws be amended to read as follows:

7. Curriculum and Degrees.

- a. Instruction shall be given within a period of not less than four full college years of at least 32 weeks each, and shall be scheduled over a minimum of five days per week. *On and after April 1, 1965, each member college shall require of each candidate for a degree in Pharmacy, completion of not less than five full academic years of training, including both pre-pharmacy instruction and a minimum of three years of professional instruction.*
- b. The degree of Bachelor of Science (B.S.) or Bachelor of Science in Pharmacy (B.S. in Phar.) and these degrees only, may be given for the completion of the *prescribed* course.

One sentence is added to paragraph a. and one word is changed in paragraph b.

The year 1965 is suggested as meeting the requirements mentioned above of giving adequate notice and so on, and with the additional thought in mind that statistical studies indicate that college enrollment will be on the increase by 1960.

The Association may possibly desire to recognize a distinctive or a professional degree to be awarded graduates of the extended course. This, while quite feasible, is a separate problem. In this connection, however, it should be pointed out that while it is inevitable that the colleges will have students on both the four-year and the extended programs simultaneously during the period of transition from one to the other, any proposal to permit the offering of both programs simultaneously on a more permanent basis than during the transition period would, if adopted, place the Association in the position of endorsing a practice contrary to sound pedagogy unless

the two programs are conducted separately. If students in the four-year program take the same advanced courses with the students in the extended program, and are able to compete successfully with the extended program students, it would appear that the objectives of the extended program had not been realized.

4. A Note Calling Attention to a Course Entitled Communications

A brief note is appended here to call the attention of the academic Deans and Pharmacy Deans and administrators to a course entitled "Communications," and to its possibilities as an alternate course for English Composition. This course was introduced at the University of Minnesota in 1945. It requires teachers specially trained in the technic of teaching the course successfully but it is now available in over twenty-three Colleges and Universities throughout the country.

STEPHEN WILSON, *Chairman*

Report of the Joint Committee on the Status of Pharmacists in the Government Service

The Committee is commissioned to represent the National Associations in matters pertaining to the well being of the pharmacist in the military and other government services as well as the progress of pharmacy in those services. The members of the Committee and the associations they represent are:

- Dr. John Dargavel, George H. Frates, Roger Lusby, representing the National Association of Retail Druggists.
Dr. Charles Rogers, Dr. Noel Foss, Dr. George DeKay, representing the American Association of Colleges of Pharmacy.
Colonel F. Royce Franzoni, Dr. Robert L. Swain, J. Doyle Norris, representing the National Association of Boards of Pharmacy.
Charles G. Towne, Lloyd M. Parks, Arthur H. Einbeck, Chairman, representing the American Pharmaceutical Association.

The Korean War and Selective Service has made many problems in military pharmacy, they will be covered in this report. One meeting of the Steering Committee was held in Washington. Most of the liaison officers representing the various government services were present. There was no meeting of the whole Committee although there is a current need for such a meeting. Since some of our Committee members would have to be brought in from as far as the Pacific Coast such a meeting could not be financed by the present state of the Committee treasury. Since there are a number of problems still unsolved I would recommend that a full meeting of the Committee be held at an early convenient date when a majority of the Committee and the liaison officers can be present.

The United States Public Health Service

The pharmacy officers of this fine branch of the Service, which has its responsibility the medical service of the Coast Guard, the U. S. Revenue Service, the Geodetic Survey, and Quarantine, has grown from 3 pharmacy officers of ill defined duties in 1943 to 70 pharmacy officers ranking from Junior Assistant to Director, equivalent to the Navy rank of Captain. Pharmacist Director George F. Archambault, Chief of the Pharmacy Branch, Division of Hospitals, states that approximately 7 new appointments will be made each year, all from hospital pharmacy interns. Candidates for internship are selected from among the Class A and B Accredited Colleges of Pharmacy. All of the colleges have been advised of these vacancies through a bulletin sent out early this year. This internship was developed under the planning of Captain Archambault a result of personal experience and consultation with the Hospital Pharmacy group. The annual pay of the intern is set at \$4268.16 for those with dependents. Additional financial credits are given for any previous military service. It is planned to have internships set up in each of seven general hospitals, Baltimore, Boston, New Orleans, Norfolk, San Francisco, Seattle, and Staten Island. Under Captain Archambault a high type of pharmacy service and usefulness has been developed, setting a pattern for some of the other government services. With Director T. Foster, also a pharmacist, they have developed a service that cannot be performed by any other profession than pharmacy. As the pharmacist in the Public Health Service continues to prove his abilities

and his adaptability, more places for pharmacy graduates are being made. The Public Health Service offers a career that is useful, attractive and remunerative.

The United States Air Force

Lt. Colonel Elliott P. Rigsby, MSC Air Force, Chairman Armed Services Materiel Standardization Committee has recently succeeded Lt. Colonel Paul C. Larnce, MSC, as the responsible officer for pharmacy in the Air Force. Colonel Larnce is now at the USAF School of Aviation Medicine, Gunther Air Base, Alabama. We wish him a continuance of a brilliant career. Before his departure from Washington, Colonel Larnce reviewed the Air Force Pharmacy situation. He stated that the Air Force was established without Corps distinction, hence every officer in the Air Force has an equal opportunity for promotion. He felt that the Air Force had about all the enlisted pharmacists that it could use at the present time and that surplus pharmacists were being assigned to other duties within the Air Force. Pharmacists are not now being commissioned from civil life since there are many now in the Service that deserve the promotion when an officer vacancy exists. About 25 per cent of the pharmacy ROTC graduates are given an opportunity for a commission in the Air Force Reserve. About 90 MSC Officers are being called from the Reserve this year of which about 1/6 will be pharmacists. There are at present no pharmacy technician schools in the Air Force but it is anticipated that with the slackening of selective service and the enlisted pharmacists return to civilian life the reopening of the technician schools to supply adequate pharmacy service may be required. A recent directive however (160-18 24 June 53) issues regulations on pharmacy management and sets a high objective on dispensing, prescriptions, inspections, a place on the therapeutic board, type of personnel required, which would indicate that the Air Force realizes the scientific background required in pharmacy is getting more complex and makes specific mention that the pharmacy school graduate is the desirable person for the assignment.

If a pharmacist at the present time, wants a commission in the Air Force and is not an ROTC graduate he must come in as an enlisted man and take his chances on promotion or selection to Officer Candidate School. A study of trends within the Medical Service Corps of the Air Force would seem to indicate that it will be among

the first to elevate the rank of the dispensing pharmacist in the Air Force following the example of the Public Health Service and the Veterans Administration.

The United States Navy

Navy Pharmacy is growing slowly but steadily. There are something like 54 regular commissioned pharmacy officers on active duty. Commander R. L. Taylor, MSC, USN, has been the pharmacy officer on the staff of Surgeon General Pugh. He has recently been assigned to the U. S. Naval Hospital, San Diego, California. Lieutenant Commander Kenneth E. Bechtloff MSC, USN, is now the designated Pharmacy Officer. We feel that Commander Taylor will make equally as great a contribution to Navy Pharmacy in his new field as he has made in Washington. The Corps operates under the direction of Rear Admiral J. Q. Owsley, a Medical Officer. A bill has been introduced in Congress to set up a Chief of the Medical Service Corps who would be a Medical Service Corps Officer. We have signified our support of this measure to Senator Saltonstall and Congressman Short, chairmen of the Armed Service Committee of the respective houses of Congress. It is probable that the pressure of more important matters will postpone final action on this bill until the next congressional session. The Navy still has the discriminatory law which limits promotion to the grade of Captain. This is being corrected in the Army in a bill presented this year and at the time of writing this report has passed the House. It has been understood that when the Navy reaches the point where the need presents itself, they will cause to have introduced a similar bill. There are 54 commissioned pharmacists on active duty at this time. There are also 315 inactive pharmacy reserve officers. There are 65 pharmacists serving in enlisted capacities. These men are eligible to take the professional examinations given each year in April. There are about 8 vacancies in the Regular Navy Medical Service Corps for pharmacy service. Usually a pharmacist must serve an enlistment before he can qualify for one of these commissions. At present every Naval Hospital pharmacy has a commissioned pharmacist in charge. These officers have collateral administrative and other duties in connection with their pharmacy duties. Pharmacy officers are also assigned to each hospital ship, hospital corps school, the larger dispensaries, the Naval Research Institute, the Armed Services Medical Procurement

Agency, the Bureau of Medicine & Surgery and some are attending colleges toward advanced degrees. The Hospital Corps School is prepared to teach men to become pharmacy technicians should peace time produce the anticipated shortage of pharmacists in the Navy. Commander Taylor had stated that the experience following the last war showed that it was necessary to provide for this need. It indicates to us the need that a career pattern will have to be developed commissioning more pharmacists in the Medical Service Corps and assigning them as officers to dispensing duties. Dr. Robert P. Fischelis is an honorary consultant to the Surgeon General of the Navy and has met once with Admiral Pugh, the Surgeon General, and the other consultant to discuss Navy Medical problems.

The United States Veterans Administration

The Veterans Administration continues to be the service that has the greater number of pharmacists at a satisfactory level. There are at present 450 pharmacists on duty in Veterans Administration activities. The starting salary (Gs 7) is approximately \$4200.00 with annual increases and promotion opportunities. Since there are 60,000 Korean veterans being discharged each month, and many of these may be immediate or future responsibilities of the VA it is planned to increase the VA hospital program by some 6000 beds. 11 new hospitals will create vacancies for 25 or 30 additional pharmacists. There are at present 109,000 beds in the VA hospitals and they are about 90 per cent occupied. The VA pharmacy facilities are reported by Chief Geiger to be adequately staffed. The committee looks with a great deal of favor on the splendid career pattern being developed under Chief E. Burns Geiger and for the fine status that pharmacy enjoys in the Veterans Administration. In September 1952 a two year Pilot Pharmacy Residency Program was established at the Veterans Administration Center, Los Angeles, California, in cooperation with the School of Pharmacy of Southern California, it is progressing satisfactorily. 4 residents completed the first academic year. The "On the job training phase, supervised jointly by the Chief Pharmacist at the Center and a member of the University faculty. The academic progress of the four residents indicate that the program is making a major contribution to the overall medical program of the Veterans Administration. These men will graduate from the University with the degree of MS in Hospital Pharmacy.

This course was developed in collaboration with a consultant committee composed of Dr. W. Paul Briggs, Don Franke, W. Arthur Purdum and Mr. I. T. Reamer. It is expected that this residency plan will be a continuing policy and its expansion will depend upon needs and the required funds.

The United States Army

The head of the Army Medical Service Corps is Colonel Robert L. Black. He is not a pharmacist. Lt. Colonel Henry D. Roth, a pharmacist, is the Chief of the Pharmacy Administration Supply Section and is the consultant on pharmacy to the Surgeon General. There are several civilian consultants to the Surgeon General, who are members of this committee. An objective of pharmacy will be reached this year which will correct the discrimination in promotion to the rank of Colonel. Raising the allowable number of Colonels from 2 per cent of the Corps to the overall Army average of 8 per cent. Bill R H 5509 introduced by Mr. Short, Chairman of the Armed Service Committee of the House, has at this writing passed the lower house and we have been assured favorable consideration by the Senate.

At a meeting of the Steering Committee held in January of this year Colonel Black stated his Army Pharmacy Program objectives.

1. Improve pharmaceutical standards and procedures in Army hospitals and dispensaries.
2. Standardize and modernize pharmacy equipment to conform to these standards and procedures.
3. Stabilize commissioned personnel in so far as the military situation will allow.
4. Adopt and publish a formulary.
5. Establish pharmacy organizationally in Army hospitals as a separate service rather than subordinate it to other services.
6. In times of emergency divert the induction stream of registered pharmacists to the medical service where utilization will be in a specialty or in areas allied thereto.
7. In times of peace provide a compensatory inducement which will attract registered pharmacists as career enlisted men for pharmacy operation or reinstate qualified technician training which will maintain pharmaceutical standards in army hospitals.
8. Continued support of the Army ROTC program until such a time as an alternate system is devised which will be an improvement over the present.

The Steering Committee meeting at the time felt that this was a far reaching step. Some objectives have been met. The induction cen-

ters are at the present time directing pharmacists to the Medical Service which formerly was not always the case. The Committee feels that the compensatory inducement that will attract pharmacists in peace time should be more in line with Civil Service standards, the Veterans Administration and the United States Public Health Service all of which recognize the specialty of hospital pharmacy. Using registered pharmacists as pharmacists in the military hospitals at enlisted rank—even though additionally compensated would lower the standing of the pharmacists as a member of the medical team. There was also some consideration given to Warrant Officer Status for pharmacists but it was felt that same objections apply. This plan was dropped by the Army.

The utilization of pharmacy officers is improving. We now have commissioned pharmacists serving in combat units as assistants to battalion surgeons. We have one as a deputy commander of a large training center. One only needs to follow the career of a pharmacist like Colonel Bernard Aabel, who served variously as assistant to the Surgeon General, Military Attache at Helsinki, now Deputy Commander of the Medical Replacement Training Center at Camp Pickett, Virginia, where some 5 per cent of the inductees are sent for their training. It is not anticipated that there will be any additional pharmacy ROTC Units set up. Present planning seems to indicate the setting up of Branch Immaterial Units if and when funds are available. The four pharmacy ROTC units are supplying a splendid group of Reserve Officers for the Army and Air Force but too few are availing themselves of the opportunity to go into the regular service on a career basis.

The Medical Service Corps of the Regular Army has 880 officers, there is an attrition loss of about 32 officers each year. Sixty per cent of the Corps or 528 are assigned to Colonel Roth's Section and of this less than 100 are pharmacists, although the Surgeon General had reasonably assumed that pharmacists would ultimately make up the majority of this section; which would justify the fact that a pharmacist should head the Section. However, we have great difficulty in leading pharmacists to seek commissions in the Regular Army. We have pharmacists who have rather accepted less responsibility who do not take advantage of the opportunities created bility in the present emergency, so that they might leave the services

and get back to civilian life more quickly. It has been remarked by high pharmacy officers, now in the service, that it is disturbing to see the attitude of many of the pharmacist inductees and ROTC through the efforts of this Committee and its predecessors. Unless more pharmacists take advantage of the Reserve and Regular Army programs which are available to them, pharmacy's position in the Medical Service Corps will be relegated to a more minor function, and we can then expect that the Chief of the Pharmacy Supply and Administration Section can well be from some other profession related to Medicine or Administration. The desire to be of service to ones country does not have to be the primary objective of every pharmacist, but we should have more of it. The place to begin teaching these things to our youth is in the homes, schools and colleges. The Colleges of Pharmacy might well study the career patterns of the Armed Services and direct attention to this field of endeavor. Not enough has been done in these fields and you can well be sure that the ultimate survival of our country depends upon a realization that our liberties came at a great sacrifice and that our very existence depends upon the outcome of the gigantic struggle in which we are presently involved.

Summary and Recommendations

It is evident that pharmacy has made progress during the year. There has been a better utilization of pharmacy inductees. There is still a reluctance on the part of pharmacy students stepping from ROTC to a career in one of the branches of the Armed Services. We find too that many pharmacists would rather serve their term of selective service as an enlisted man, than apply for officer training which would lengthen their term of service.

It will be well to examine the purpose of the service pharmacy technician schools to see if the end product is to be used to replace registered pharmacists or work under close supervision of a pharmacy officer. It is well for us to assume that the Military Services require the same high degree of pharmacy service enjoyed by the Veterans Administration and the United States Public Health Service both of which require registered or college trained pharmacists. We must continue our insistence that adequate pharmacy service cannot be given by unsupervised technicians in lieu of the college trained pharmacists. We look with approval to the planned setting

up of a Chief of the Medical Service Corps of the Navy—the Committee should continue to press its support to this measure already introduced to both houses of congress. Setting this group of officers under its own head will pin point the various problems affecting its service and pharmacy is one of its major sections. The Committee should continue to press the objective of eliminating the promotion discrimination to the Navy rank of Captain and the ultimate provision for an officer of General or Admiral rank for the respective services. The Services need a constant stream of outstanding young men, it is the responsibility of the colleges to give the necessary guidance and information to insure replacements that will bring and maintain these services on the level that we expect them to be.

Material on a career in the Government Services should be made available to young students who are forming plans for their future. If pharmacy in the Services is to continue to grow it is our responsibility to see that the services have available to them a selection of some of our very best young men. When we consider the many different vocations that make up the profession of pharmacy let us not forget that government pharmacy is one of its important segments. We feel that the contribution made to government pharmacy by the respective heads of those services should be suitably recognized and that resolutions should be sent to their respective chiefs commending them.

ARTHUR H. EINBECK, *Chairman*

Annual Report of the American Council on Pharmaceutical Education, Inc.

The following constitutes the twenty-first annual report of the American Council on Pharmaceutical Education, Inc., to its sponsoring organizations, the American Pharmaceutical Association, the National Association of Boards of Pharmacy and the American Association of Colleges of Pharmacy. It covers the period from August 18, 1952 to August 18, 1953.

The Council and Board of Directors

Membership: The Council is composed of ten members who also constitute the Board of Directors. Each of the three sponsoring organizations appoints three representatives to serve as members of the Council, and the American Council on Education appoints one representative to serve as a member. The present membership of the Council is as follows:

Representing the American Pharmaceutical Association	Term Expires
Robert P. Fischelis, Washington, D. C.	1958
George D. Beal, Pittsburgh, Pa.	1956
L. D. Bracken, Seattle, Washington	1954
Representing the American Association of Colleges of Pharmacy:	
Hugo H. Schaefer, Brooklyn, New York	1958
B. V. Christensen, Columbus, Ohio	1956
Troy C. Daniels, San Francisco, California	1954
Representing the National Association of Boards of Pharmacy:	
Frank W. Moudry, St. Paul, Minnesota	1958
P. H. Costello, Chicago, Illinois	1956
Robert L. Swain, New York City, New York	1954
Representing the American Council on Education:	
Edward C. Elliott, Lafayette, Indiana	1954

Changes in Membership: Dr. Hugo H. Schaefer succeeded Dr. Glenn L. Jenkins as a member of the Council on August 18, 1952. The terms of four of the present members of the Council will expire at the time the sponsoring organizations meet in annual convention in 1954.

Executive Officers of the Council: At the annual meeting of the Board of Directors held in Chicago, Illinois, on January 22-23, 1953, George D. Beal, B. V. Christensen, and P. H. Costello were elected to serve respectively as President, Vice President and Secretary-Treasurer for the ensuing year.

Director of Educational Relations: Dr. Melvin W. Green has served as Director of Educational Relations since September 1, 1952 and will continue to serve in that capacity during the ensuing year.

Meetings: The Council held two meetings during the period covered by this report, the Annual Meeting, preceded by the regular annual meeting of the Corporation, occurred on January 22-23, 1953 and another meeting was held on June 20, 1953. All meetings were held at the Palmer House, Chicago, Illinois. The Council met jointly with the Executive Committee of the American Association of Colleges of Pharmacy at the time of the Annual Meeting.

Examination of Colleges: During the period covered by this report, twenty-seven of the seventy-four accredited colleges of pharmacy were visited. The visitations were for the purpose of continuation of accreditation or re-classification in twenty-five instances; for informal advisement in one instance; and for the purpose of collaborating with a regional accrediting agency in one instance (University of Pittsburgh). The present Director of Educational Relations participated in every visitation, except the University of Pittsburgh, where Dr. Deno functioned for him. Dr. Deno participated in the examination of two other colleges, Dr. Elliott in 5, Dr. Christensen in 4, Dr. Fischelis in 4, Dr. Schaefer in 4, Mr. Bracken in 3, Dr. Beal in 2 and Mr. Costello in 1. Every college which requested examination during this academic year was visited.

General Improvements Noted: The year 1952-53 may be considered a year of general improvement in all phases of academic program and procedure.

Physical Facilities: During the year, several colleges moved into their new buildings and parts of buildings as indicated in the report for last year. One University has a large building under construction for pharmacy and several schools have new wings and remodeling under construction or in the planning stages.

Personnel: During the year 1951-52, 4 staff members were reported as deceased, 47 resigned and 9 retired. Against this loss the following staff additions were made: 45 instructors, 31 assistant professors, 2 associate professors, 14 professors, 9 deans, 1 acting dean, 5 part-time lecturers and 2 visiting professors.

There has been a steady improvement in educational background of staff members. This changing caliber of staff is shown in part by the fact that the total staff of our colleges published a total of 528 papers, or an average of 7.3 publications per school.

As far as numbers are concerned, the field of pharmaceutical chemistry appears to be in the best position, while there is a considerable dearth of teachers in pharmacy, pharmacognosy and pharmacy administration, especially the latter. Much of the gap in pharmacology appears to have been filled, but there is still need for well-trained men in this area.

Curriculum: Changes in curricula showed the greatest advance during the past academic year. Practically every college has been

studying curricula actively during the past year. In most cases these changes were made by the staff as a whole, after careful study of the Blanch-Webster report on "The Pharmaceutical Curriculum" and proceedings of the various teachers' seminars. Individual course syllabi have been reworked with the introduction of more vital material. Staff members have been comparing syllabi to determine degree of overlap and duplication. Sequence of courses is generally improved, also. Although here is still ample room for improvement in this area, great progress has been made.

The majority of schools require no pre-pharmacy courses for admittance to the professional area, but accept students directly from high school. Twelve schools, having 4-year programs, are established on the basis of 1 year of pre-pharmacy plus 3 years in the school of pharmacy. Thirteen schools now have programs of more than 4 collegiate years. Of these schools, 5 have optional 5-year programs. Of the institutions that make extended programs mandatory: one requires 2 years of pre-pharmacy and 4 years of pharmacy; 3 require 2 years of pre-pharmacy and 3 years of pharmacy; 3 require 1 year of pre-pharmacy and 4 years of pharmacy; one has a total course somewhat in excess of 4 years.

Other Improvements: Policies and practices of admission and promotion of students have improved somewhat. Libraries have been improved slightly with regard to holdings. There appears to have been an increased use made of libraries during the past year by the assignment of definite reference problems, term papers, etc. Nine colleges have developed in-service programs, seminars and the like this year for the first time. In fact, 39 schools are active now in such programs, others have worked closely with state and local associations of pharmacists in developing professional programs.

Special Studies: During the year, the Director of Educational Relations made a study of the per capita cost for professional undergraduate instruction and student-faculty ratios (professional) for 71 of the 74 accredited colleges of pharmacy. The data was classified by geographic location, type of school, and size of graduate program. The data was made available in tabular form to the Deans of the Colleges of Pharmacy.

Cooperation with the National Commission on Accreditation: During the year the National Commission on Accreditation became

interested in the possibility of a closer cooperation between various agencies accrediting schools or curricula. On an experimental basis, the Council cooperated with the Middle States Association in two ways. In the case of an institution-wide examination of a large University (Pittsburgh) by the Middle States Association, Dr. Deno participated as a representative of the Council. In the examination of a College of Pharmacy by the Council, the Middle States Association delegated a representative to participate in the Council examination.

Representatives of the Council have discussed the problem of professional school accreditation with representatives of the National Commission, with responsible executives of some of the regional accrediting agencies, and several college presidents. As a result of these activities a definite policy relative to cooperating with regional accrediting agencies has been adopted.

Published List of Accredited Colleges: The classified list of Accredited Colleges of Pharmacy, published on July 1, 1952, was revised and published on July 1, 1953. No colleges were added to or deleted from the previous listing. The latest listing (July 1, 1953) contains the names of seventy-four Accredited Colleges of Pharmacy. Sixty-four of these colleges are designated as Class A, 5 as Class B, 4 as Class C, and 1 as Class Y-4.

Accreditation Manual, Fifth Edition: No change has been made in policy, procedure or standards for the Accreditation of Colleges of Pharmacy as published in the Accreditation Manual, Fifth Edition.

Financial Statement: A financial statement for the last calendar (fiscal) year, January 1, 1952 to December 31, 1952 follows:

January 1, 1952—cash balance on hand.....\$10,750.45

Receipts:

Sponsors' contributions	\$ 1,800.00	
Fees, inspection of new colleges.....	349.00	
American Foundation for Pharma- ceutical Education	20,000.00	22,149.00
		\$32,909.45

Disbursements:

Rent and light.....	\$ 1,000.00
Salaries	15,372.07
Council meetings.....	3,162.39
Inspection expense.....	6,653.69
Printing	624.56
Office supplies and equipment.....	583.44

Postage, telephone, telegraph, express.....	351.22	
Miscellaneous, bonds, dues, etc.....	288.83	\$28,036.20
Cash balance on hand, December 31, 1952.....		\$ 4,873.25

P. H. COSTELLO, *Secretary*

Report of the Committee on Predictive and Achievement Tests

The personnel of the Committee on Predictive and Achievement Tests was greatly changed in 1952 when three of the five members represented new appointments. One of the new appointees was the chairman, Dr. Frank T. Maher.

Under Dr. Maher's energetic leadership the committee approached its work early in November and considerable progress was made by correspondence before Dr. Maher's resignation in May caused by his acceptance of a position on the staff of the Mayo Clinic and consequent discontinuation of duties in pharmaceutical education.

This report represents a summary of the information developed under Dr. Maher's leadership, and sincerest appreciation is expressed for his good work.

The purpose of the committee was stated by Dr. Maher as follows:

"Our Committee is striving, in a broad sense, to evaluate the level of development with respect to future education at least, attained by students entering, or seeking to enter, the formal study of pharmacy at the college level. As a second function, we are seeking ways and means of evaluating the level of progress with particular reference to education in Pharmacy attained by students graduating from our colleges of pharmacy, and anticipating early participation in professional practice. Upon this background, we are seeking means of predicting academic progress of students entering the study of Pharmacy, and to compare the progress made during the study of Pharmacy

with the subsequent demands to be placed upon that progress by professional practice. It would be my personal hope that a clarification of these objectives and functions might lead logically to better and more uniform standards of admission and graduation, and to a closer rapport with State Examining Board and with the profession as a whole."

Historical

The history of the Committee on Predictive and Achievement Tests and significant developments in this area were summarized by Dr. Maher in his report "Comprehensive Examinations in the Senior Year of Pharmacy" given at the 1952 meeting of District No. 4 of the National Association of Boards of Pharmacy and the American Association of Colleges of Pharmacy.

Predictive Tests

There was general agreement that the most valuable single type of testing was concerned with improvement of the methods of selecting students for the schools of pharmacy. This conclusion was based on a statement from one school that in a class of 58 freshmen admitted directly from high school, 22 of the students did not scholastically survive to begin the second year of study. This loss represented wasted time, wasted money, and considerable unhappiness.

It was emphasized that collegiate education in pharmacy is a transitory period, and for this reason predictive testing should in the ultimate analysis concern itself with professional success. There should be increasing emphasis toward this latter objective in selecting students for their life-long occupation.

From the materials at hand it is apparent that the College of Pharmacy at the University of Illinois employs the most comprehensive system of pretesting applicants for admission to the school. This process was discussed by Dean Earl R. Serles in "A Method for the Selection of Students Applying for Admission to Colleges of Pharmacy" (*Am. Journal for Pharm. Education*, 13, (1949), 581-586). A sample packet of the complete materials is available upon request.

In general the schools of pharmacy base their selection upon a composite evaluation of high school records, pharmaceutical experience, personal interview, and standard achievement and predictive tests.

All too often the achievement and predictive tests are given during orientation week, and the results are received too late for value in the admission of candidates. It should also be noted that the trend in high schools toward the "life adjustment" program has nullified the value of orthodox achievement tests.

It was agreed that one term, one year, or two years of collegiate education before admission to the professional schools was by far the best criterion for indicating scholastic success at the professional level.

Comprehensive Examinations

Several of the committee members discussed personal experience with comprehensive examinations given toward the end of the professional curriculum. Two values in particular were assigned to these examinations. First, the examinations were valuable to the teachers in showing the effectiveness of individual courses. Second, the examinations were designed to emphasize to the students the desirable objective of correlating the information from the many courses of the curriculum. It was in this latter objective that results were most generally disappointing, and note was taken of the decreasing utilization of comprehensive examinations in fields outside of pharmacy.

One of the inherent difficulties in constructing comprehensive examinations for pharmacy is its rapid rate of change. The ideal examination is first evaluated for reliability and then re-used for many years. The rapid introduction of new drugs and consequent changes in fundamental theories of medicinal action precludes continued utilization of any examination.

At one university comprehensive examinations were given at the end of the second year as a prerequisite for junior status and at the end of the final year as a prerequisite for graduation. Course grades in the final year were eliminated in favor of the over-all grades from the comprehensive examination.

There was general agreement within the committee that the final comprehensive examination represents an unnecessary duplication of the state board examination, and it was noted in the experience at Minnesota as reported by Rogers and Johnson in 1944 that grades on comprehensive examinations, honor point ratios in the same subjects covered in the comprehensive examination, and numerical averages in the same courses were equally good in predicting

success on the state board examination. On this basis there is no advantage derived from the extra procedure of constructing and administering the comprehensive examinations.

There was enthusiastic agreement within the Committee that the comprehensive examination could best be placed at the end of the second year of collegiate study as a prerequisite for continuation in the study of pharmacy. The end of the second year represents the most graceful and least wasteful period for the discontinuation of study in a school of pharmacy and prevents unqualified students from continuing in an objective which is most probable to meet with failure.

General

It might seem most desirable for the personnel of the Committee on Predictive and Achievement Tests to construct tests of both types to be used in the many schools of pharmacy. This is not possible with the present limited membership of the Committee. The preparation of valid and reliable examinations requires highly technical competence in the special field of examination construction as well as professional content. The diversity of pharmaceutical curricula and institutional individuality also deter efforts toward universal tests at this time.

Objectives

It is concluded that each school should proceed with the development of methods and examinations to meet individual needs. As these results can be evaluated they should be discussed so that other schools may take advantage of such progress. It is the purpose of this Committee to receive, digest, correlate, and disseminate such information.

E. A. BRECHT, *Temporary Chairman*

Report of Committee on Audio-Visual Education

The Annual Report of the Committee on Audio-Visual Education for 1952-53 is presented in three parts: (1) the status of the Annual Award Project, (2) a report on Conference on International

Standards for Film Cataloging, (3) a report on Conference Concerning Motion Picture Information Services for the Medical Professions.

PART I

The Annual Award Project

At the Philadelphia meetings of the Association, August 1952, the Committee recommended the establishment of an annual award (on a trial basis) to be known as the Award in Audio-Visual Education of the American Association of Colleges of Pharmacy. The amount of the award was recommended to be \$250.00 with "members of the academic staff of a College of Pharmacy holding membership in the AACP . . ." being eligible to participate for the award. The details of the project were presented in last year's report which has since been published in *The Journal*, Vol. 16, 582-586 (1953). Since official approval by the Executive Committee was not obtained until its fall interim meeting, the project was not initiated this year. However, the award will be made in 1954, assuming that all stipulations set forth in the plan have been fulfilled. The Committee on Audio-Visual Education wishes to make clear that it reserves the right to withhold an award if, in the opinion of the judges, entries do not meet the standards of excellence desired by the Committee. The plan for the award as set forth in the recommendation is as follows:

1. The amount of the award will be \$250.00.
2. Members of the academic staff of a College of Pharmacy holding membership in the AACP will be eligible to compete for the award.
3. Contestants will submit a film (movie, or film strip) which in the opinion of the judges is the best creation as regards originality and pedagogical effectiveness (time of presentation, systematic arrangement of subject matter, clearness of titles, etc.). The technical exactness of the creation will be of only incidental consideration. All movie films shall be 16 mm. color or black and white, and with or without sound. The latter features will also be of incidental significance and will not in themselves be the basis for final judgment.
4. The area of the curriculum for the contest each year will be announced at the annual meeting of the Association of the preceding year. For 1953-54 the area will be pharmacy techniques, a suggested list of titles for which is included Appendix A.
5. The details for submitting the films will be as follows: all films will be submitted to the judges one month before the annual meeting; at least two films must be submitted, otherwise

no award will be made; in the event the award is not made in a given year, the amount of the award in the subsequent year will remain the same. All contest films will be available for showing at the annual meeting.

6. The judges of the contest will be (presumably) the Committee on Audio-Visual Education of the AACP with the addition of such expert personnel that the Executive Committee may wish to appoint.
7. The winning film will remain the property of the school in which the film is produced. However, it will be the privilege of member colleges to procure copies of any contest film, such procedure being that the request for a copy be made from a commercial laboratory, the original film to be supplied to the laboratory by the school owning the film. This procedure will make it possible for member colleges to procure copies of films that they desire. (Teaching personnel in medical schools are using this practice to good advantage).

A letter has been sent to all deans announcing the program and requesting them to encourage interested personnel of their faculties to participate. With this letter was sent a complete Report of the Committee for 1951-52, and a request that individuals who plan to submit an entry notify the chairman of the Committee by November 1, 1953.

PART II

Conference on International Standards for Film Cataloging

A Conference on International Standards for Film Cataloging was held at the Library of Congress in Washington on May 11th and 12th. Although the Committee on Audio-Visual Education was not represented, it had been duly notified by Secretary Zopf, and subsequently a letter of acknowledgment was sent to Mr. Max McCullough, Executive Secretary, Department of State, Washington, D. C. The summarizing report of the Conference is herewith presented.

Preliminary Summary Report

The Conference on International Standards for Film Cataloging, held May 11-12, 1953 at the Library of Congress, was attended by 52 specialists from the field of film production, film evaluation, and film cataloging.

The Conference was held at the request of the United Nations Educational, Scientific, and Cultural Organization, to make recommendations toward the development of internationally acceptable standards for cataloging descriptions, appraisals, and availability of educational films and filmstrips.

It was held under the sponsorship of the Subcommittee on Catalogue, U. S. National Commission for UNESCO. A series of meetings to a similar purpose was held in February, 1953 by the United Kingdom National Commission for UNESCO.

The UNESCO Secretariat will receive the recommendations of both meetings, and the comments of other film-producing member states, and will from them attempt to develop standards which will be generally acceptable. The UNESCO draft will be circulated for comment of member states before it is submitted to the UNESCO General Conference. Mr. Henny de Jong, who attended both conferences as representative of UNESCO's Department of Mass Communication, emphasized that the standards, if adopted, would serve only as a guide to specialists, and that their general acceptance would depend upon whether specialists in film-producing countries find them useful. He pointed out, however, the great need for such standards for descriptive, appraisal, and availability entries, in view of efforts abroad, particularly in less developed countries, to establish film libraries and other audio-visual services. Educators, scientists, and other users of audio-visual materials the world over need the answers to the same questions about any film or filmstrips: What is it about? How useful is it for the purpose intended? Where and how may it be obtained?

Bearing these requirements in mind, the Conference in the United States reached agreement on the following principles:

- (1) That it is practicable to establish international standards for cataloguing (description, appraisal, availability) of films and filmstrips.
- (2) That the system of cataloguing should be based upon a three-card (3"x5") system, with provision for recording such additional data as may be practicable, including if necessary a microcard.
- (3) That the rules for descriptive cataloguing used in the Library of Congress and in the British Film Institute should form the basis for the descriptive catalogue entries, and that the resolution of any differences should be made between the institutions, UNESCO to be kept informed of any contemplated or actual changes.
- (4) That the status of appraisal and evaluation is such that an internationally acceptable manual is needed to establish the desired standards and that the Chairman of Work Group B should see to it that a suggested draft is prepared to accompany the report of the Conference.
- (5) That a new form for availability entries, and methods for determining such entries as approved by Work Group C, should be studied by UNESCO with a view to its inclusion in the standard three-card system.

With respect to implementation, two additional recommendations were proposed in the form of resolutions and adopted by the Conference. The first urged that UNESCO be requested through proper channels to stimulate the setting up of national and regional card cataloguing centers; the second urged the Library of Congress to provide leadership for implementing the needed service in the United States, and UNESCO to seek ways of encouraging the publication of cards, the collecting and disseminating of data.

Three Work Groups were organized in advance of the Conference, and were responsible for developing the preliminary studies which were considered by the Conference as a whole:

Work Group A, on Standardization of Descriptive Catalog Entries, Chairman Miss Lucile Morsch, Chief, Descriptive Cataloging Division, Library of Congress.

Work Group B, on Standardization of Appraisal Entries, Chairman, Dr. Edgar Dale, Bureau of Educational Research, The Ohio State University; Alternate, Mr. J. James McPherson, Director, Audio-Visual Services National Education Association.

Work Group C, on Standardization of Availability Entries, Chairman, Mr. Roger Albright, Director, Educational Services, Motion Picture Association of America.

Conference participants were welcomed to sessions at the Whittall Pavilion, Library of Congress, and at the Congressional Hotel, by Dr. Luther H. Evans, Librarian of Congress. Mr. John Flory, Advisor on Non-Theatrical Film, Eastman Kodak Company, reported on the International Film Cataloging Conference held at Rochester, New York, in 1951 under the auspices of the Film Council of America, and led the discussions on plans for implementation.

Miss I. A. Wright, Chairman, Subcommittee on Catalogue, and Consultant to the International Motion Picture Service of the Department of State, was general chairman of the Conference.

PART III

Conference Concerning Motion Picture Information Service for the Medical Professions

On May 21, representatives of the health professions met in Chicago to discuss problems of mutual interest. The American Association of Colleges of Pharmacy was represented by Dean Earl R. Serles, Dr. Frank Maher and Dr. D. L. Deardorff. Dr. Maher represented the Committee on Audio-Visual Education. Since this report includes the minutes of the meetings of May 21st and June 4th, additional comments are not necessary. The Committee on Audio-Visual Education will continue to work with the joint Committee for purposes of representing the interests of pharmaceutical

education and to maintain the proper liaison with the membership of this Association.

Background to May 21 Conference

Changing concepts and demands have raised many problems pertaining to the production, distribution and utilization of Audio-Visual materials. These problems range from the improvement of informational services to the development of architectural designs for the better use of educational tools. Many of these problems are common to all the medical professions and much can be gained by discussing them together. Certainly, we should get to know each other better.

The preliminary conference will provide time for a discussion of common problems. However, certain events suggest that the general discussion should be followed by specific consideration of how we may clarify our respective roles in supplying descriptive and evaluative information on medical films.

Library of Congress Card Catalog Activities. When the Library of Congress, some two years ago, began printing cards for motion pictures similar to those for books, the responsibility for submitting data on non-governmental and noncopyrighted medical films was accepted by three groups known jointly as the Cooperating Medical Film Agencies for Library of Congress. These comprised the Committee on Medical Motion Pictures of the American College of Surgeons, the Committee on Medical Motion Pictures of the American Medical Association and the Medical Audio-Visual Institute of the Association of American Medical Colleges.

The Library of Congress cards are filling a definite need for a standard source of film information. However, inclusiveness of film coverage must be assured. And the use of the cards by users must be promoted.

What the Library of Congress Card is. The Library of Congress card is purely descriptive, indicating such things as film content, production data, author and producer. A set of five or more cards on the same title are used for cross indexing.

What the Library of Congress card does not provide. The Library of Congress card does not attempt to evaluate films nor does it provide distributional data, both of particular importance in scientific films because of the wide range of quality and the multifarious methods of distribution.

Present sources of evaluative information. At present the main sources of evaluative and distributional information on medical films are journal reviews and film catalogs. Both are needed. However, a common inclusive source of film evaluational and distributional data is likewise needed.

Evaluative card for interfile with Library of Congress suggested. The possibility of using journal reviews for secondary publication in the form of 3x5 evaluative cards has been initially explored by the Medical Audio-Visual Institute. These cards might contain all except the purely descriptive portions of the reviews and be interfiled with the Library of

Congress cards to augment their usefulness to users in the medical sciences. The printing of these cards may be done by some commercial publication agency and the cards sold to users on a subscription basis. This has not yet been explored thoroughly, although preliminary costs have been obtained.

Two informal meetings. The Institute staff had an informal luncheon meeting in March with Mr. Ralph P. Creer of the American Medical Association and Miss Helaine Levin of the American Dental Association. This was followed in April by a meeting which included Dr. C. O. Van Houweling of the American Veterinary Medical Association, Miss Helen Yast of the American Hospital Association and Dr. D. L. Deardorff of the University of Illinois School of Pharmacy.

A conference was agreed upon. Discussions at both meetings revealed a desire for a meeting of audio-visual people representing a number of medical and allied agencies interested in the common problems of adequate and standard information.

MINUTES

Meeting held Thursday, May 21, 1953

at the University of Illinois School of Medicine

The University of Illinois School of Medicine was host at the luncheon in the Union Building. Words of greeting and statements of general problems were given by Dr. Earl Roy Series, Professor of Pharmacy and Dean of the College of Pharmacy, and Dr. Roger A. Harvey, Acting Dean of the School of Medicine, University of Illinois.

The Conference convened after lunch in the Board Room.

Present: See names and addresses of conferees attached.

Chairmen: Professor Thomas S. Jones and Dr. David S. Ruhe.

Library of Congress Cards. The present status of the Library of Congress cards was reported upon. Approximately 600 films in medical and related areas have been indexed and classified on cards to date. The volume will increase rapidly. The Library of Congress also publishes a quarterly and annually cumulative catalog which carries:

1. An alphabetical listing by title of the descriptive cards, along with a complete reproduction of each card.
2. A name index.
3. A subject index.

The Library of Congress cards are currently distributed on a subscription basis by the Card Division of the Library of Congress. General use of the cards is being promoted by the Library of Congress, with assistance from interested groups or associations.

Data for non-copyrighted and non-governmental medical films are presently being channeled to the Library of Congress by the Medical Audio-Visual Institute for the Committee on Medical Motion Pictures of the American Medical Association, the Committee on Medical Motion Pictures of the American College of Surgeons, and the Medical Audio-Visual Institute of the Association of American Medical Colleges, (together known as the Cooperating Medical Film Agencies). The ac-

curacy and adequacy of card coverage is determined by the resources and competence of these three groups.

International Standards for Film Cataloging. The United Kingdom National Commission for UNESCO and the U. S. National Commission for UNESCO have each sponsored, in London and Washington, a conference on International Standards for Film Cataloging. General agreement has been reached on the use of three cards: the first card will be descriptive (almost identical with the present LC card), the second card will be evaluative, and the third card will carry availability information. National agencies for handling the cataloging of domestic materials have not been determined, although the Library of Congress is being asked to accept the evaluative and availability cards as well as the descriptive cards. It will be six months or a year before the domestic and international procedures can be finalized.

Value of LC Cards. After discussion it was agreed that the LC cards, carrying descriptive information alone, are needed for reference purposes.

Submission of Data for LC Cards. A round-table poll brought agreement that card data should come from all special interest agencies.

Selection of Titles for Data Submission. The conferees voiced unwillingness to prepare and submit data on films which they did not consider worth the effort or which, because of film selection policies, they could not approve. This conflicts with the Library of Congress policy of including all films. The group emphasized that the Library of Congress should be made aware of this conflict but that it should not prevent the submission of data by the specialty groups.

Procedures for Submitting Data. It was agreed that, temporarily at least, data should be submitted through the present channels of the Cooperating Medical Film Agencies. It was agreed that a work committee at a later meeting should consider the advisability of changing this name to make it more inclusive. It was suggested that we should discuss with the Library of Congress on details of our procedures to prevent work duplication. The work group was charged with exploration of the possibility of expanding the number of cooperating medical science members in the Cooperating Medical Film Agencies.

It was moved (Van Houweling-Creer) and carried that:

1. Each interested group or association will send data sheets to individual producers or sponsors for as much information as they can give.
2. The data sheets will be checked in the office of the specialty association for errors, omissions, and adequacy of summary, and necessary corrections made.
3. The data sheets will be sent to the Medical Audio-Visual Institute.
4. The data sheets will be checked and forwarded to the Library of Congress.

Promotion of LC Cards. Recommendations for promoting the LC cards included:

1. Articles and items in the journals and/or bulletins of each specialty group.
2. Consideration of the LC cards at annual meetings of medical librarians:
 - a. American Medical Library Association June 17.
 - b. American Dental Library Association June 14, 15
 - c. Special Libraries Association
3. Distribution by various agencies of reprints of articles in *Journal of Medical Education*, May 1953; *LIBRARY OF CONGRESS CARDS FOR MOTION PICTURES—HOW DO WE USE THEM*.

An Evaluation Card. The possibility of using evaluative information reprinted from reviews of the several specialty journals was explored. Sample 3x5 cards made from journal reviews were examined. While it was agreed that an evaluative card was needed, it was felt that further exploration should be made into the means of publication. If the Library of Congress will accept publication of these cards it will simplify procurement on the part of users since the LC already distributes the descriptive cards.

Failing acceptance on the part of the Library of Congress, commercial publication of evaluative cards should be explored. A commercial publisher can photo-offset the cards, using material taken from the various specialty journals. These could be sold on a subscription basis to all users.

It was moved (Levin-Yast) and carried, that each group or association write to Dr. Luther Evans, Librarian of Congress, urging him to accept the handling of evaluative cards.

It was moved (Greer-Getty) and carried that the appointed work group investigate further the possibility of making evaluative cards for interfile with the descriptive cards of the Library of Congress.

Group Organization and Future Activities. It was recognized that the present conference was preliminary and informal, and any action as a group must await reports to parent bodies and the formation of some formal organization of the group.

A poll of the group revealed that this conference was valuable and that a continuance of the group was most desirable. It would provide a means for each organization to know of and work with other organizations in common problems. A few of the problems suggested included: architectural plans and classroom design, television usage and rights, and production activities.

It was agreed:

1. To report to parent associations.
2. To meet again, possibly in October, as planned and designated by the work committee.

The following work committee was appointed to meet in May or early June: Dr. Van Houweling, Mr. Creer, Dr. Maher, Miss Levin, and Dr. Ruhe.

The responsibilities of the work group were specified as including consideration and study of the following:

1. A suitable name.
2. A statement of common purpose.
3. The scope and eligibility of membership.
4. A study of evaluative card production and distribution.

A vote of thanks was given to the University of Illinois School of Medicine for the excellent facilities provided for the conference.

Meeting adjourned 5 P.M.

CONFEREES

American Assoc. of Colleges of Pharmacy

Dr. Frank Maher, Ass't Dean
School of Pharmacy
University of Illinois
1853 W. Polk St.
Chicago 12, Illinois
Dr. D. L. Deardorff
School of Pharmacy
University of Illinois
1853 W. Polk St.
Chicago 12, Illinois

American College of Surgeons

Dr. George H. Miller, Ass't Dir.
American College of Surgeons
40 East Erie St.
Chicago 11, Illinois

American Dental Association

Miss Helaine Levin
Film Librarian
American Dental Association
222 East Superior
Chicago, Illinois
Dr. John M. Spence
Professor of Operative Dentistry
Loyola University School of
Dentistry
1757 W. Harrison
Chicago, Illinois

American Hospital Association

Miss Helen Yast, Librarian
American Hospital Association
18 East Division
Chicago, Illinois

American Medical Association

Mr. Ralph P. Creer, Secretary
Committee on Med. Motion Pictures
535 North Dearborn Street
Chicago 10, Illinois

American Nurses Association

Miss Kathryn Linden
Consultant of Audio-Visual
Program

American Nurses Association
2 Park Avenue
New York 16, New York

American Vet. Medical Association

Dr. C. D. Van Houweling
Ass't Executive Secretary
American Vet. Medical Association
600 South Michigan Avenue
Chicago 5, Illinois
Dr. R. E. Rebrassier, Secretary
Council on Education, AVMA
Veterinary Laboratory
Ohio State University
Columbus 10, Ohio
Dr. Robert Getty
Iowa State College
Ames, Iowa

Assoc. of American Med. Colleges

Dr. David S. Ruhe, Director
Medical Audio-Visual Institute
185 North Wabash Avenue
Chicago 1, Illinois

Dr. J. Edwin Foster, Assoc. Dir.
Medical Audio-Visual Institute
185 North Wabash Avenue
Chicago 1, Illinois
Professor Thomas S. Jones
Director of Med. & Dental Illust.
University of Illinois
1853 West Polk St.
Chicago 12, Illinois

Mrs. Frank D. Prager, Librarian
Medical Audio-Visual Institute
185 North Wabash Avenue
Chicago 1, Illinois

National Film Board of Canada

Mr. Donald A. R. Moffatt
Research & Distribution Officer
Health and Medical Films
National Film Board of Canada
71 Bank St., Ottawa, Ontario

MINUTES

Meeting Held June 4, 1953

Offices of American Veterinary Medical Association

Meeting of work group, as appointed at May 21 Conference, to discuss assignments of Conference. Present: Miss Helaine Levin, Dr. C. D. Van Houweling, Dr. D. S. Ruhe, Dr. J. Edwin Foster; absent: Mr. Ralph Creer, Miss Helen Yast, Dr. Frank Maher.

1. Agreed that, in light of numbers of absentees, discussion would be tentative, shared with absent members, and a second meeting held August 6, when it is hoped that all members can attend.

2. Definition of Purpose of Group

General: "To organize, meet and act together on those matters concerning audio-visual education in the medical and health sciences which may be done better as a group than as individuals."

Specific: a) To exchange information regarding programs of the member organizations.

b) To discover, disseminate and exchange descriptive and evaluative information on audio-visual materials, methods and equipment.

c) To hold meetings of representatives from the constituent organizations, and to sponsor, conduct or support such training or workshops as may be called for by agreement of the group.

d) To conduct such other group activities as may be suggested by the group in research, production or utilization activities within the scope of the general purposes of the members.

3. Membership and Eligibility

Possible member agencies were listed as follows:

a) *General Medical Agencies:* American Medical Association, American Dental Association, American Veterinary Medical Association, American Nurses' Association, National League for Nursing, American Hospital Association, American Public Health Association, American Pharmaceutical Association.

b) *Schools of the Medical Sciences*: Association of American Medical Colleges, Association of American Dental Schools, Association of Deans of American Colleges of Veterinary Medicine, American Association of Colleges of Pharmacy, Association of Schools of Public Health (Optometry, Chiropody, Osteopathy, Medical & Dental Technicians, Physiotherapists).

c) *Medical Specialty Groups*: American College of Surgeons, Society of American Bacteriologists.

d) *Allied Medical Groups*: Biological Photographic Association, Association of Medical Illustrators, National Film Board Health and Medical Films, Interdepartmental Committee for Medical Visual Aids (U. S. Govt.).

e) *Allied AV Groups*: Society of Motion Picture and Television Engineers, National Audio-Visual Association, Department of Audio-Visual Instruction of the National Education Association, Film Council of America.

It was tentatively agreed that the following groups be considered for primary membership and invitation to the first formal organizational meeting of the group: American Medical Association, American Dental Association, American Veterinary Medical Association, American Nurses' Association and National League of Nursing (ANA-NLN Film Service), American Hospital Association, Association of American Medical Colleges, Association of American Dental Schools, Association of Deans of American Colleges of Veterinary Medicine, League of Nursing Education, Association of American Colleges of Pharmacy, American College of Surgeons, Society of American Bacteriologists, National Film Board, Interdepartmental Committee for Medical Visual Aids.

4. *Name*

a) It was tentatively agreed that the name Cooperating Medical Film Agencies be retained for Library of Congress card data submission, even though new agencies begin to supply data.

b) For the group as a whole the names "Medical and Health AV Council" or "AV Council for Medical and Health Sciences" were suggested.

5. *Evaluation Cards, Data Submission and Investigation*

a) Reviewed terms of primary publication in Journals.

b) Assigned to work group members the collection of data re possible commercial handling of interfile cards:

(1) Miss Levin: Card Abstract Service, publisher

(2) Dr. Ruhe: Health Education Council, publisher

6. *Meeting of Council Group*

Tentatively agreed to meeting in Chicago, middle of November. Agenda to be worked out by work group in August. Suggested pattern of organizational action: that each organization have one official representative and vote for expediting business. Suggested that meeting have 1-1½ hours devoted to details of organization.

DONALD C. BRODIE, *Chairman*

Report of Committee on Constitution and By-Laws

During the past year one proposal for amending the By-Laws of the American Association of Colleges of Pharmacy has been presented. This proposal was circulated by mail to all member-colleges of the Association in the Interim Report of the Committee on Constitution and By-Laws under date of March 23, 1953, copies of which report have been placed in your hands. This proposal is ready for vote on its adoption at this time.

Proposal—To amend Article I, Section 8 of the By-Laws of the American Association of Colleges of Pharmacy as follows:

By deleting, from line 3 of paragraph a, the words, "and addresses," and adding at the end of the paragraph the sentence, "The names of men and women shall be identified as such and listed separately."

By deleting, from line 1 of paragraph b, the words, "before April 1," and replacing with the words, "within thirty days after the spring commencement," and by adding at the end of the paragraph the sentence, "The names of men and women shall be identified as such and listed separately."*

LLOYD M. PARKS, *Chairman*

NOTE:

At the Executive Session held on August 18, 1953, the following proposal was read by Secretary Zopf:

"It is proposed by the Conference of Teachers that the title 'Committee on Teachers' Conference, Article VIII, be changed to read 'Council on Conference Teachers,' in the By-Laws of the AACP so as to conform to the change now adopted by the Conference of Teachers."

The motion was voted on by a show of hands and carried unanimously.—Ed.

*The present By-Laws, published in *Am. J. Pharm. Ed.* **16**, 729 (October, 1952), require the submission of the names and addresses of all persons upon whom degrees have been conferred during the academic year. There is little, if any, value in recording the addresses since most of them become obsolete immediately after graduation. The purpose of requesting the identification and listing of names of men and women separately is to assist the Chairman of the Executive Committee in developing accurate statistical information from the reports. Under the present situation it is not always possible to distinguish between men and women students on the basis of their given names.

The proposed change in paragraph b would allow the report on student admissions to be submitted at the same time as the above report on graduates, the advantages of which procedure are obvious.—From the interim report, dated March 23, 1953.

Report of the Committee on Civil Defense Education*

In accordance with Resolution No. 6 passed at the Philadelphia meeting of the American Association of Colleges of Pharmacy in August 1952 and recently approved by the Executive Committee of the Association at its interim meeting held in Chicago, January 22-24, 1953, the members of the Special Committee on Civil Defense Education are recommending to each College of Pharmacy which is a member of the Association, that, it include in its educational program at the earliest possible date, and preferably not later than September 1953, a program of Civil Defense Education which would include the following subject material, and to which would be allotted the minimum hours indicated.

Standard First Aid Course.....	Hrs. (20) total
Advanced First Aid Course.....	Hrs. (10) total
Instructors First Aid Course.....	Hrs. (15) total

Texts

American Red Cross First Aid Textbook
First Aid Surgical & Medical—4th Edition—Cole & Puestow
(Appleton Century Crofts)

The above texts are all standard items which are available from National Agencies, and which would thereby provide uniform coverage and credit to the individual completing these courses.

It is to be noted that the Standard text provided by the American Red Cross is somewhat old with the latest revision dated 1945, and includes certain items which will have to be brought up to date by the institutions (e.g) latest accepted methods of artificial respiration).

American Red Cross Certificates are available for issue to all individuals who complete the standard, advanced and instructors courses.

This Committee feels that all Pharmacy graduates are in a position to act as instructors, and should have in their possession all of these certificates.

We are enclosing a more detailed outline of the suggested program for your guidance in this regard.

*This report consists largely of a letter sent to the deans of the colleges and a suggested syllabus for civil defense education.—Ed.

We would sincerely appreciate an early indication from you concerning your reactions to the suggestions of this Committee and an indication as to whether you will find it possible to include this program in your list of studies beginning in September 1953.

JAMES H. KIDDER, *Chairman*

SYLLABUS

1. Standard Course, American Red Cross
2. Advanced Course, American Red Cross
3. Instructors Course, American Red Cross

REFERENCES AND TRAINING AIDS

FIRST AID COURSE FOR STANDARD AND ADVANCED CERTIFICATES

The combined course consists of the following topics:

1. Precautions and Limitations in First Aid Work
2. General Principles of First Aid; Common Conditions Requiring First Aid; Materials Needed.
3. Anatomy and Physiology
 - a. Structural Systems
 - b. The Circulatory System
 - c. Respiratory System
 - d. Nervous System
4. Bandaging
5. Wounds
 - a. Types of Wounds
 - b. The Ill Effects of Wounds
 - c. Treatment of Wounds
 - d. Dressings
 - e. Foreign Bodies
 - f. Wounds Inflicted by Animals
 - g. Crush Injured
6. Shock
 - a. Shock
 - b. Blood Transfusions
 - c. Electric Shock
7. Injuries to Large Blood Vessels
 - a. General Measures in Case of Bleeding
 - b. Types of Bleeding
 - c. Methods of Controlling Hemorrhage
 - d. Summary
8. Burns; Frost Bite
9. Transportation of the Injured
10. Fractures, Dislocations and Sprains
11. Compound Fractures; Compound Dislocations
12. Gas and Bomb Raids
 - a. Introduction
 - b. Chemical Agents
 - c. Classification of Chemical Agents
 - d. The Gas Mask
 - e. Aerial Bombardment
 - f. Immersion Blast
 - g. Atomic Warfare
 - h. Plans for Civil Defense Against Atomic Bombing
13. Respiratory Emergencies
 - a. Normal Respiration
 - b. Oxygen Want
 - c. Respiratory Arrest
 - d. Respiratory Obstruction
 - e. Combination of Arrest and Respiratory Obstruction
 - f. Effects of Noxious Gases
 - g. Open Wounds of the Chest
 - h. Air, Blood, or Pus in the Chest Cavity
 - i. Drowning
 - j. Stimulants

14. Injuries of the Chest
 - a. Anatomic and Physiologic Considerations
 - b. Injuries Requiring Emergency Treatment
 - c. Summary
15. Abdominal Emergencies
 - a. Classification and Types of Abdominal Injuries
 - b. Symptoms and Signs of Abdominal Injuries
 - c. First Aid Treatment of Abdominal Injuries
 - d. Abdominal Pain
16. Emergencies of Genito-Urinary Tract
17. Wounds of the Mouth, Face and Neck
18. Injuries of the Scalp, Skull, Spine and Nervous System
 - a. Scalp
 - b. Skull
 - c. Brain
 - d. Spinal Cord
 - e. The Peripheral Nerves
19. Medical Emergencies
 - a. Fainting or Syncope
 - b. Emergencies due to Heat
 - c. Emergencies Ensuing from Heart Disease
 - d. Convulsions
 - e. Coma
 - f. Chemical and Drug Poisoning
- g. Food Poisoning
- h. Contagious Disease
 - i. Chills
 - j. Exposure to Cold
 - k. Starvation
 - l. Dehydration
20. The Prostrate Patient
 - a. Causes of Prostration
 - b. Procedures in Examination of the Prostrate Patient
 - c. Treatment
21. Civilian Versus Military Casualties
 - a. Wartime Civilian Accidents
 - b. Types of Military Injuries
 - c. Comparison of Civilian and Military Wounds
22. Miscellaneous Conditions Frequently Requiring First Aid Care
23. First Aid in Industry
 - a. First Aid Stations
 - b. Value of Bandaging, Protection and Rest
 - c. First Aid Treatment of Industrial Injuries
24. Functions of "The Fordham University Medical Aid Station" during An Atomic Bombing**

(Hours of training under this heading not included in above totals)

FIRST AID INSTRUCTORS COURSE TOPIC ASSIGNMENTS

Triangular Bandages
Pages 25-34***
Cravat Bandages
Pages 35-41

Roller Bandages and Dressings
Pages 18-22 & Pages 42-49
Shock
Pages 7-17

**The Committee is especially anxious to emphasize that when the word "Fordham" appears under No. 24, it is desired and intended that the local institution undertaking and implementing this program should substitute its own name and its own Civil Defense Station. This should include not only a nominal establishment of the installation, but a coordination of training and activity with the local community facilities, as well as the maintenance of practical applications and demonstrations in coordination with local hospitals and agencies.

***Pages refer to American Red Cross First Aid Text.

Wounds and Their Care	Fractures
Pages 50-54	Pages 137-141
Bleeding and Control of Bleeding	Fractures
Pages 54-59	Pages 142-149
Special Wounds and Their Care	Fractures
Pages 59-75	Pages 149-155
Artificial Respiration	Dislocations, Sprains, and Strains
Pages 87-110****	Pages 155-161
Fractures	Pages 162-167
Pages 118-123	Pages 168-175
Fractures	Pages 176-193
Pages 123-129	Pages 194-207
Fractures	Pages 208-214
Pages 129-137	

REFERENCES AND TRAINING AIDS

REFERENCES

- United States Civil Defense Health Services and Special Weapons Manual, United States Government Printing Office.
- "The Burn Problem in Atomic Warfare" by Everett Idris Evans, *Journal of the American Medical Association*, July 29, 1950.
- "The Treatment of Burns After an Explosion of an Atomic Bomb" By Charles C. Lund. Part I, *New York Medicine*, October 20, 1950; Part II, *New York Medicine*, November 5, 1950.
- "The Treatment of Shock in Victims of an Atomic Explosion" by Robert C. Hardin, *New York Medicine*, January 5, 1951.
- "Therapy of Ionizing Radiation Casualties" By James P. Cooney and Gerald M. McDonnell. *New York Medicine*, January 20, 1951.
- "Medical Planning for Disaster in the City of New York" By Marcus D. Kogel. *New York Medicine*, November 20, 1950.
- "Acute Radiation Syndrome" By John Z. Bowers, *Journal of the American Medical Association*, January 13, 1951.
- "First Aid Instructor's Manual"; American National Red Cross Revised Edition 1946.
- "Individual and Community Health", By William W. Stiles; The Blakiston Company.

TRAINING AIDS — FILMS

- Help Wanted—Johnson & Johnson Company—Showing Time—45 Min.
- Before Arrival of Doctor—American Red Cross—Showing Time—45 Min.
- Atomic Medical Care—PMF—5143—Showing Time—30 Min.
- Chemical Casualties—TF-8-1180—Showing Time—30 Min.

****Supplementary Information for class use in teaching Artificial Respiration will be included with the purchase of the American Red Cross First Aid Textbook after January 1953.

Care of Fractures—TF—1586—Showing Time—30 Min.

Prevention of Shock—TF—8-1659—Showing Time—30 Min.

These films can be obtained from the Central Army Headquarters Libraries in local areas.

Report of Delegates to the American Council on Education

This is a report of the meeting of organization members of the American Council on Education held in Washington, D. C., January 30-31, 1953.

Inasmuch as your speaker was the only delegate able to attend, this report should be considered to be an individual report, as it does not necessarily reflect the thinking of the other two delegates.

The American Council on Education has as its members 79 Constituent Organization Members and 63 Associate Organization Members. These groups, as President Adams brought out in his opening address, represent the interest of various professions, various areas of subject matter, various types of institutions and the individual teachers and professors.

The primary role of the Council, President Adams stated, is to provide a forum for the exchange of information and opinions, to the end that a more coherent and unified educational policy may result. It serves as framework where the various components of American

education can find a means of bringing its particular concern and interest to bear in the overall resolution of educational policy and philosophy.

In addition to the general sessions held during the day and one-half meeting, there were two meetings of each of seven sections. The sectional meetings were devoted to the following subjects:

1. Meeting the Expanding Needs of Education.
2. Selective Service and ROTC: Their Interrelationships and Their Impact on Higher Education.
3. Ways and Means of Achieving Public Understanding of Education.
4. The Operation of Public Law 550 (The New GI Bill).
5. Education of Women for Expanding Responsibilities.
6. Increasing the Supply of Qualified Teachers—A Problem in Elementary, Secondary, and Higher Education.
7. Preparing for World Responsibilities.

Your delegate devoted his attention to the discussion of Selective Service and ROTC: Their Inter-relationships and Their Impact on Higher Education.

Major General Lewis B. Hershey, USA, Director of Selective Service, stated that he believed it would be necessary to reduce the number of students deferred under Selective Service regulations in order to meet military requirements of the future. Those deferred by regulation (as of January 1953) include 1,100,000 dependency deferments, 333,000 in ROTC programs, and 95,000 student deferments for the purpose of finishing high school or their current college years.

He expressed satisfaction with the basic deferment policies, particularly in view of its flexibility. One of the problems under the present law was that student deferments were, in many cases, becoming dependency deferments upon completion of the college work. This, General Hershey indicated, undermines the basic premise of universal service.

Other panel speakers endorsed the current Selective Service program. Following this, the recommendation of the Council's

Committee on Relationships of Higher Education to the Federal Government was presented for discussion. This recommendation is, as follows: "That the present policy of student deferment be retained at both the undergraduate and graduate levels; and that if a decrease in the number of deferred students becomes necessary, it should be achieved by modifying the cut-off test scores and the proportions of the classes deferred, rather than by giving priority to students enrolled in specific courses." There was a general agreement with this recommendation. This same Committee of the Council, on May 29, approved the following resolution and copies were sent to the Director of Selective Service and to the Director of Defense Mobilization: "That Committee on Relationships of Higher Education to the Federal Government recommends to the Director of Selective Service and other appropriate governmental agencies, that except in case of emergency, a year's advance notice shall be given before putting into effect any new regulations in respect to deferment of college and university students and that revisions currently proposed be further reviewed with representatives of higher education before a final plan is officially announced."

The status of the ROTC programs were discussed by representatives of the various services. Rather than include their comments made in January the following, more recent, information regarding the quotas for the fall of 1953 is offered:

1. The Navy Department contemplates no change either in the input quota or in total quota.
2. The Army has been admitting to the junior course, about 55 per cent of enrolled sophomores. It is expected that there will be only a slight decrease, if any. No units will be discontinued.
3. The Air Force will probably have a decreased number going into their units because of new criteria being used in the selection process. Greater emphasis will be placed on the need for more flying personnel. Four categories, into which students enrolling in advanced AFROTC courses will be placed, have been established for the courses beginning in September. The largest quota will go to Category I which includes those students qualifying for and desiring flight training.

While students in pharmacy are classified as "Students in the Healing Arts" and, thus, are not specifically required to meet certain class standings, this audience is not so greatly concerned with the above. However, students of pharmacy *are* affected by the overall picture of military manpower requirements and it behooves each of us to keep abreast of the current trends in this regard. Too, those schools with students in a general ROTC program of one of the Armed Forces will be interested in any shifts which may occur in these programs.

In the discussion of Ways and Means of Achieving Public Understanding of Education, William E. Lloyd, Vice President, National School Public Relations Association, stated that this "... is a public relations function of education—in fact, I think we might go so far as to say that it is the major function, but not the ultimate goal, of public relations."

He went on to say that all public relations "come eventually to individual human relationships of every day life" and that our greatest army of ambassadors is the class room teachers. Unfortunately, they are for the most part untrained but they can, and should, be made to realize the full significance of their vital role in public relations. Our teachers are the "interpreters of public education" to the layman and, for the most part, they are willing to assume this task.

In any public relations assignment, what is attempted is to "win friends and influence people." We want to make people favorably disposed to public education. We want to build attitudes—"favorable attitudes that create a favorable climate of opinion in which we and they (the people) together can work at building an effective program of education that will undergird our democratic way of life."

Those participating in this section voiced the "importance of developing and using all possible means of communication with the public and the necessity of clearing up with the public the problem of academic freedom."

The suggested means of achieving good communication with the public include (1) the use of lay boards and (2) the proper use of alumni, parents, friendly lay organizations. On this last point, it was stated that these groups should be enlisted in the battle for better understanding of education and not merely as a source of gifts.

Some members of the section even saw investigations as a means of overcoming the apathy of the public towards education. It was agreed, however, that the attention of the investigation must be focused on education, if confidence and support were to be gained. Some voiced their fear that the technics and tactics used in investigations would make this means of achieving support one method which would be approached with caution.

The discussion on the Operation of Public Law 550 (The New GI Bill) brought out a desire for an amendment to the bill on the one hand and, on the other hand, a desire to request no changes for the present.

A speaker representing the Association of American Colleges gave the argument that an amendment should be requested on the basis that "Freedom of Choice" was being denied the veterans on the premise that the veteran, because the new law provides only financial aid rather than a financial means for an education, seeks to attend lower-tuition schools—schools which they would not have otherwise selected.

An incomplete study on enrollment trends of veterans under the new bill, gave some evidence that the trend was in favor of low-tuition schools. Figures for two more semesters were believed necessary, however, before conclusive evidence could be obtained.

Four of five representatives of veterans' organizations present favored no action of the present bill until evidence indicated the necessity for a change. They reported that complaints from veterans were inconsequential in number.

In the section on Education and Expanding Responsibilities for Women, it was announced that the American Council on Education had established a Commission on the Education of Women to explore the current and long range needs of women as a result of the impact of changing social conditions on them. This project is directly related to the expanding responsibilities of women and to an analysis of their educational needs. The study was started February 1, 1953.

The need for an alleviation of the professional shortages will be only one part of the Commission's project. It was pointed out that grave shortages occur in those fields where women compose the largest corps of workers. These were enumerated as (1) the teaching field where women represent 75% of the personnel and, especially, in the elementary field where 90% are women; (2) nursing where women are 98% of the total personnel; (3) social work where they are 75%; and (4) medical technicians where women are 94% of the total workers.

The problem of Increasing the Supply of Qualified Teachers in Elementary, Secondary, and Higher Education was considered of such importance that a separate section was devoted to its discussion.

In regard to the need for teachers by colleges and universities, J. Lloyd Trump, Professor of Education and Head, Office of Teacher Replacement, The University of Illinois, brought out that by 1965 there would be about three and a quarter million students in our colleges and universities. This is about a 40% increase over the number enrolled in 1947-48. This increase would result from the fact that, in addition to the increase in the percentage of high school graduates entering college, 78% more children were born in 1947 than were in 1932. It is the 1947 group which will be requesting space and teachers in 1965. It has been estimated that an average of 12,000 college and university teachers a year will be needed for each of the next 13 years in order to meet the needs of 1965. This figure compare very unfavorably with the approximately 4,000 university teachers graduated with the Ph.D. degree in 1949-50. Therefore, as Prof. Trump states, "unless steps are taken in the near future to

recruit college teachers, there will be an extreme shortage by 1965, probably much sooner, and the colleges will be faced with the same problem of poorly qualified candidates, unfit teachers, and so on, that have been plaguing the elementary schools and are about to plague the high schools of this country."

The two fundamental causes of the shortage, according to Prof. Trump, are "cash and frustration." First, he referred to inadequate salaries and second, to the feeling of frustration which comes because teachers believe they are not adequately trained and supervised.

His suggestions as aids in solving the problem were four in number.

1. A return to instruction in the science of classroom management.
2. A closer relationship between college, high school, and elementary teachers in service.
3. Teacher education should be truly recognized as a function of college and university training. In this regard, he commented that "In all too many institutions of higher learning, the real interest of the professors is in the training of research workers. There is also a need—to recognize that superior teaching is a commendable activity and not to place so much emphasis on productivity in research and publication alone."
4. Better on-the-job supervision. This calls for better training in human relations, in the case of those selected as supervisors, and then providing time for "democratic but positive" supervision.

In a paper before the section on Preparing for World Responsibilities, C. E. Arndt, Professor of International Relations Education, New York University, enumerated some of the obstacles "which obstruct the democratic leadership of this country as it makes effort to prepare the people of the United States for the responsibilities to which they have suddenly fallen heir." These obstacles are as follows:

1. An atmosphere of fear and suspicion which is at large in the land. We live in such an atmosphere at the national level. We have allowed—"emotion to replace reason in the discussion and study of controversial questions."
2. The need to reorganize our individual habits, beliefs, and conduct, in terms of the requirements of a changing world. The world of today is "vastly different from that which obtained when, notably in youth, our view of life and our values were being built." The forces of atomic energy and expanding world communism are new and—are so potent that they must be taken seriously into account if we are to retain the freedom we so highly cherish."
3. The failure of the public to understand our need for assuming world responsibilities.
4. The tendency to link an interest in international understanding with progressive education on one hand and communist sympathy on the other.
5. The growing opposition to teaching about the United Nations and UNESCO in our schools and colleges. In elaborating on this point, Prof. Arndt states that one charge which leads to this opposition is that UNESCO is "advancing the totally un-American doctrine that the prime function of public education in the United States must be that of capturing the minds of our children, at the earliest possible age, for the cause of world government." This, he states, is a "willful distortion" and that what is advocated in the UNESCO Seminars is "international cooperation, international understanding and loyalty to mankind as a whole."

In concluding this report your attention is called to the bulletin *Higher Education and National Affairs* issued weekly by the American Council on Education. These bulletins, to the best of my knowledge, are shipped to each University in a shipment of fifty. In addition, as many as fifteen will be mailed to individuals designated by the university administration. This bulletin is of extreme value to those interested in keeping current with enrollment trends, changes in Selective Service regulations, and changes in laws affecting veteran's education.

CHARLES W. BLIVEN, *for the Delegation*

Report of Delegates to the National Drug Trade Conference

During the year 1952-53 the National Drug Trade Conference held a meeting of its Executive Committee in Washington, D. C. in November 1952 to make plans for the Annual Meeting. This meeting was attended by your Delegate, Dean Charles W. Bliven.

The Annual Meeting was held in New York City on December 2, 1952, and the AACP was represented by your delegates Dean C. Bliven and Dr. Hugo H. Schaefer. Circumstances prevented Dr. Ernest Little from attending and he later asked me to present this report.

President Frailey opened the meeting with appropriate remarks and included your delegate, Hugo H. Schaefer, in his appointments to the Resolutions Committee and Dean Charles W. Bliven to the Nominating Committee.

Chairman Fischelis of the Committee on Uniform State Legislation presented his report which emphasized the status of those Uniform Acts already approved by the Conference and stressed the need of adopting those which were still under consideration. He believed that state barbiturate acts should be brought into line with the Durham-Humphrey amendment and asked for more aggressive state enforcement.

Dr. Karl Bambach presented a progress report on the matter of trademark registration in foreign countries and the abuses which the industry is trying to overcome. Dr. Lloyd C. Miller, chairman of the USP Revision Committee, spoke on the international concept of the problem, including that of nomenclature, and asked for the help of the Conference in his contacts with the World Health Organization.

George H. Frates reported on the current status of Fair Trade and called attention to the need for more aggressive action on the part of trademark owners in order to effectuate contracts.

Dr. Hugo H. Schaefer presented a report on the availability of pharmacists taking into consideration the present trend of lengthening the years of required college study and the needs of the armed forces. He believed there was a fair balance between present supply and demand.

Admiral W. H. P. Blandy of the Health Information Foundation reviewed the work of the Foundation as the source for factual health information. He stated that the Foundation's public relations aims were: (a) Better understanding of what the public has in public health facilities, (b) To bring about their best possible utilization through health insurance, and (c) To further improve these health facilities. He described the study in Salem Massachusetts of a self-survey of health facilities by the University of North Carolina, and a child health study by Pennsylvania State College. Mention was also made of the new radio and television series programmed by the group.

Dr. W. Paul Briggs, Executive Secretary of the American Foundation for Pharmaceutical Education, presented a report on the work and accomplishments of the Foundation. He emphasized the action taken by the Foundation on the subjects of graduate fellowships and teaching fellowships in Business Administration.

Dr. Robert S. Swain presented his views on the substitution and product duplication problems. After considerable discussion the Chairman instructed the Committee on Uniform State Legislation to place this subject on their agenda for further study.

The following resolutions were adopted:

1. RESOLVED: That the National Drug Trade Conference reiterate its belief that present laws, state and federal, appear adequate for proper and complete control of barbiturates within legitimate channels and that prompt study be made of adequate control measures to prevent distribution of barbiturates in illegitimate channels and be it further resolved, that the proposed Uniform State Barbiturate Bill, previously endorsed by the National Drug Trade Conference, be re-indorsed with such modification as will bring its prescription provisions into conformity with the provisions of the Durham-Humphrey amendment to the Federal Food, Drug and Cosmetic Act, and that the Committee on Uniform State Laws be instructed to revise the proposed bill accordingly.

2. RESOLVED: By the National Drug Trade Conference that approval be given to amending the Harrison Act so that preparations containing codeine may be dispensed upon oral prescription in those cases where the Federal Bureau of Narcotics finds that such dispensing will not be against the public interest.

3. **RESOLVED:** That the National Drug Trade Conference express to the Surgeon-General of the Army its opposition to the proposal that a Warrant Officer rating be created for pharmacists to meet certain types of pharmaceutical service in the Army, as it would appear to be in conflict with the policy established by the Army and agreed to by the pharmaceutical profession when the Pharmacy, Supply and Administration Section of the Medical Service Corps was established by Act of Congress, believing it would divert pharmacists who should receive commissions in the Medical Service Corps to a Warrant Officer grade and be it further resolved that a copy of this resolution be sent to the Surgeon General, United States Army and to the Chief of the Medical Service Corps, United States Army.

4. **RESOLVED:** That the National Drug Trade Conference again fully endorses the work of the American Foundation for Pharmaceutical Education and urges retailers, wholesalers and manufacturers within the drug and allied industries to continue to give liberal financial support to the Foundation in order that sufficient funds may be available to carry out its plans to the end that pharmaceutical education and the practice of pharmacy may be improved and advanced.

5. **RESOLVED:** By the National Drug Trade Conference, that the drug and allied industries again be commended for their statesman-like approach to the problem of providing more and better medical care to the people of the United States by establishing the Health Information Foundation and that they be urged again to give continued liberal financial support to its program.

6. **RESOLVED:** By the National Drug Trade Conference that it strongly endorses and urges support of the work of the Bureau of Education on Fair Trade in publicizing advantages to the public of fair trade laws which are designed for the basic purpose of protecting property values in trade marks, brands and names, and urges all members of the industry to take all practicable steps to promote and enforce Fair Trade.

7. **RESOLVED:** That the proposed standards for simplified catalogues of drugs and related products as developed by the Commodity Standards Division of the U. S. Department of Commerce be given careful consideration by all constituent members.

8. **RESOLVED:** That Dr. Lloyd C. Miller of the U. S. Pharmacopoeia be congratulated for his efforts to bring orderly and lawful procedure to the international selection of generic names for drugs by the World Health Organization (WHO), and authorizes and directs the president to appoint an advisory committee, representative of all constituent members, and that a sub-committee thereof be appointed for consideration of the active trademark problems involved in such selection.

9. **RESOLVED:** By the National Drug Trade Conference that the several states be urged, again, to amend their Uniform Narcotic Acts so that those synthetic narcotics that are added to the Harrison Act shall automatically become a part of each State Uniform Narcotic Act.

The Nominating Committee presented its report and the following officers were elected for the ensuing year: President—Carson P. Frailey; Vice-President—Frederick J. Cullen; Secretary-Treasurer—Ray C. Schlotterer.

HUGO H. SCHAEFER, *for the Delegation*

Report of the Committee on Resolutions

August 18, 1953, Hotel Utah, Salt Lake City, Utah

The Committee: L. F. Tice, Chairman; R. A. Deno, A. G. Hall,
E. A. Swinyard, G. L. Webster

I. From the report of President Troy C. Daniels.

1. **Be it resolved**, that this Association go on record as approving in principle two years of preprofessional education as a requirement for admission to the professional curriculum.

Approved by the Committee on Resolutions and on motion Tice-Kidder adopted by the Association.

2. **Be it resolved**, that Article VIII of the Constitution be amended as proposed in the call for this meeting.

Approved by the Committee on Resolutions. No further action taken since amendment of Article VIII to make the President-Elect

a voting member of the Executive Committee is to be voted upon in executive session.

3. **Be it resolved**, that the Committee on Committees be continued for 1953-54, or until there is time for the completion of this important study.

Approved by the Committee on Resolutions and on motion Tice-Burt adopted by the Association.

4. **Be it resolved**, that this problem (need for a special Joint Committee on Hospital Pharmacy Education) be referred to the Executive Committee for study and if the appointment of a special joint committee is deemed desirable, I further recommend that the matter be considered jointly with the American Society of Hospital Pharmacists.

Approved by the Committee on Resolutions and on motion Tice-Webster adopted by the Association. In approving, the Committee called attention to the extensive report of the Subcommittee on Hospital Pharmacy of the Curriculum Committee presented at this meeting, and noted that problems continue to exist in this important area.

II. From the report of the Committee on Curriculum:

5. **Be it resolved**, that Section 7 of the By-Laws be amended to read as follows:

7. Curriculum and Degrees

- a. Instruction shall be given within a period of not less than four full college years of at least 32 weeks each, and shall be scheduled over a minimum of five days per week. On and after April 1, 1965, each member college *shall require of each candidate for a degree in Pharmacy, completion of not less than five full academic years of training, including both pre-pharmacy instruction and a minimum of three years of professional instruction.*
- b. The degree of Bachelor of Science (B.S.) or Bachelor of Science in Pharmacy (B.S. in Phar.), and these degrees only may be given for the completion of the *prescribed* course.

Approved by the Committee on Resolutions with the addition of two provisos that:

- a. These proposals for amending the By-Laws be submitted to the membership the prescribed time prior to the next annual meeting so they may be voted upon at that meeting; and,
- b. The proposals for amending Section 7a and 7b be voted upon separately at the next annual meeting.

On motion Tice-Goodrich adopted by the Association together with the added provisos.

III. From the address of President-Elect, Edward C. Rief.

6. **Be it resolved**, that a public relations committee on pharmaceutical education be appointed. This committee is to consist of two or three members and the committee is to be instructed to request the American College Public Relations Association to nominate two or three members of their Association to meet as a joint committee to initiate a study of the public relations problem as it pertains to pharmaceutical education.

Approved by the Committee on Resolutions with referral recommended to the Executive Committee for consideration and implementation. On motion Tice-Burlage approved by the Association.

IV. From the report of the Committee on Activities for Alumni.

7. **Be it resolved**, that the Committee on Activities for Alumni be discontinued as a standing committee of the American Association of Colleges of Pharmacy.

Approved by the Committee on Resolutions, which notes that the Committee on Activities for Alumni earlier voted six to one in favor of the resolution and that the Committee on Committees likewise made this recommendation in their report. On motion Tice-Rowe adopted by the Association.

V. From the report of the Committee on the Status of Pharmacists in the Government Service (as formulated by the Committee on Resolutions in consonance with the facts as stated in the report).

8. **Be it resolved**, that the American Association of Colleges of Pharmacy urges that the Secretary of the Army request that the Surgeon General of the Army investigate the charge made by Colonel Robert L. Black, Chief of the Medical Service Corps, that the four Pharmacy ROTC units now in operation in our member colleges are "archaic and outmoded and were a thing of the past." **Be it also resolved**, that the American Association of Colleges of Pharmacy urges upon the Secretary of the Army that graduates of the four Pharmacy ROTC units are particularly qualified by their professional and scientific training to be assigned to professional and supervisory duties in connection with the purchase, storage, handling and dispensing of drugs, medicines, therapeutic aids and devices. It deplores the assignment and projected assignment of other officers not trained in accredited colleges of pharmacy to such duties and the assignment of pharmaceutically educated officers to duty in non-professional areas.

Be it further resolved, that the AACP deplores the discriminatory

regulations which result in a differential of one hundred dollars per month in the pay of Medical, Dental and Veterinarian officers over that of Medical Service Corps officers of equal education and professional training.

Be it further resolved, that a copy of the above resolutions accompanied by citations of the statements or regulations upon which they are based be sent to the chairman of the Joint Committee on Status of Pharmacists in the Government Service, the Secretary of Defense, the Secretary of the Army, The Surgeon General of the Army, the Chief of the Medical Service Corps, and/or other official who shall be deemed to have responsibility by the chairman of the joint committee.

Approved by the Committee on Resolutions and on motion Tice-Burt adopted by the Association.

VI. From the report of the Committee on Committees.

9. **Be it resolved**, that the following committees of the Association be discontinued after the receipt of their reports at this meeting.
 - The Committee on Activities for Alumni
 - The Committee on Pharmaceutical Research
 - The Committee on Graduate Study
 - The Committee on Personnel Problems
 - The Committee on Emergency Problems.

Approved by the Committee on Resolutions and on motion Tice-Foote adopted by the Association.

10. **Be it resolved**, that the Committee on Committees be continued for one more year so that it may receive comments and suggestions with respect to the report distributed at this meeting from delegates and officers.
11. **Be it resolved**, that as a result of the comments received before January 1, 1954, the committee revise and edit the report and submit the result to the Executive Committee, and, if approved, for publication in the *American Journal of Pharmaceutical Education*.

Approved by the Committee on Resolutions and on motion Tice-Reif adopted by the Association.

12. **Be it resolved**, that those recommendations in the revised report which make it necessary to amend the By-Laws be called to the attention of the Committee on Constitution and By-Laws for appropriate action at the next annual meeting.

Approved by the Committee on Resolutions and on motion Tice-Hall adopted by the Association.

VII. From the report of the Committee on Relation of Boards and Colleges of Pharmacy.

A. From District Number 1.

13. **Be it resolved**, that District No. 1 go on record as opposing the proposal from the Curriculum Committee of the AACP for a pre-professional requirement.

Noted by the Committee on Resolutions, which reaffirmed its support and approval in principle of two years of preprofessional education as a requirement for admission to the professional curriculum.

B. From District Number 2.

14. **Be it resolved**, that the Boards and Colleges of District No. 2 recommend that the AACP consider the establishment of a committee the function of which will be (1) to encourage colleges of pharmacy to further increase their activities in bringing their educational programs to the attention of the public and (2) to furnish guidance to colleges in such activities.

The sense of this resolution was endorsed by the Committee on Resolutions as was referral to the Executive Committee for study and possible implementation, but no further action was taken because of favorable action previously taken respecting a similar resolution, resolution 6.

C. From District Number 5.

15. **Be it resolved**, that the Fifth District recommends that the Executive Committee of the AACP restudy the possibility of establishing and maintaining a roster of professional personnel and teachers placement bureau.

The Committee on Resolutions recommended that this resolution be referred to the Executive Committee and on motion Tice-Rowe this recommendation was approved by the Association. Four additional resolutions from District Number 5 dealing with problems of public relations (see resolution 6); publication of a brochure on pharmaceutical education (to be published this fall by the Association); lack of objection to scheduling sections of teachers' conferences simultaneously; and favoring a time of meeting for the Association prior to that of the American Pharmaceutical Association were briefly presented, without recommendations by the Committee on Resolutions.

D. From District Number 8.

A resolution approving in principle a two-year preprofessional program prior to professional study has in essence, previously been approved and adopted, see resolution 1.

VIII. From an accredited delegate.

16. **Be it resolved**, that the American Association of Colleges of Pharmacy revise the procedure for the nomination and election of officers and members of the Executive Committee in such manner as to provide for at least two nominees for each office and member of the Executive Committee; and,

Be it further resolved, that an appropriate committee prepare suitable amendments or revisions in the Constitution and By-Laws to make such change in election procedure possible.

Disapproved by the Committee on Resolutions which expressed the opinion that any advantages gained by the suggested change would be offset by the encouragement of undesirable rivalry. Over the years the Association has had loyal and energetic officers chosen through the screening of a nominating committee. There has been and still is an opportunity for delegates to make additional nominations from the floor. The need for change in the customary procedure has not been demonstrated.

On motion Tice-Reece against adoption, following discussion from the floor, President Daniels called for a show of hands and declared the motion against adoption lost.

On motion Jenkins-Burlage for adoption, discussion from the floor brought out the fact that certain delegates did not vote on the Tice-Reece motion because they thought voting was to be limited to voting delegates only.

President Daniels ruled that all delegates present were entitled to vote and called for a re-vote on the Tice-Reece motion by show of hands. He again declared the motion against adoption lost.

On motion Jenkins-Chambers for adoption, discussion from the floor led to proposal for amending the Jenkins-Chambers motion.

On motion Reese-Hayman amendment to except the office of Chairman of the Executive Committee and the office of Secretary-Treasurer from the provisions proposed in resolution 16 was approved by the Association on show of hands.

President Daniels called for a show of hands on the Jenkins-Chambers motion as amended, and resolution 16 as amended was adopted by the Association.

IX. From the Committee on Resolutions.

17. **Whereas**, the proposed 1954 Seminar on Pharmaceutical Education has a greater interest potential for a larger number of faculty members than any of the preceding teaching seminars, and **Whereas**, the location of the meeting place at Storrs, Connecticut, places the site of the seminar near to the place of meeting selected by the American Pharmaceutical Association, and **Whereas**, it seems important that every circumstance be explored to encourage the attendance of the largest number of persons, and **Whereas**, certain arrangements appear to favor a reduced expenditure for travel by those in attendance; be it **Resolved**, that the Executive Committee be urged to reconsider the announced dates for the 1954 Seminar on Pharmaceutical Education and, if possible and agreeable to the host—University of Connecticut—schedule this seminar for the days immediately prior to the dates of the annual meeting of this Association.

On motion Tice-Burt adopted by the Association.

18. **Be it resolved**, that officers and delegates of the American Association of Colleges of Pharmacy appreciate the gracious hospitality of their hosts in beautiful Salt Lake City and extend official thanks to General Chairman Jack B. Heinz, Honorary Chairman Harry Landis Thompson, Vice-Chairman Dean L. David Hiner, Mrs. L. David Hiner, Mrs. Walter E. Boyden, and the host of busy, gracious and thoughtful people who have combined their efforts to make the 1953 Convention a memorable event. **Be it resolved**, that the officers and delegates of the American Association of Colleges of Pharmacy extend official thanks to President A. Ray Olpin of the University of Utah and to Dean L. David Hiner of the College of Pharmacy for the gracious and efficient manner in which they made the facilities of the University of Utah available to the uses of the Seminar on the Teaching of Pharmacognosy and the Plant Science Seminar.

On motion Tice-Jenkins adopted unanimously by the Association.

19. **Whereas**, Joseph B. Burt has faithfully and constructively served the American Association of Colleges of Pharmacy in the office of Chairman of the Executive Committee from 1948 to 1953, and **Whereas**, it is known that such service was freely and graciously rendered; be it **Resolved**, that the American Association of Colleges of Pharmacy hereby records and extends its thanks to Joseph B. Burt for that service.

On motion Tice-Reif adopted unanimously by the Association with applause and a rising vote.

20. **Whereas**, Louis C. Zopf has faithfully and constructively served the American Association of Colleges of Pharmacy in the office of Secretary-Treasurer from 1946 to 1953, and

Whereas, it is known that such service was freely and graciously rendered; be it

Resolved, that the American Association of Colleges of Pharmacy hereby records and extends its thanks to Louis C. Zopf for that service.

On motion Tice-Larwood adopted unanimously by the Association with applause and a rising vote.

The Committee on Resolutions requested that a copy of resolution 18, 19 or 20 be conveyed to each person named therein as soon as practicable.

On motion Tice-Bliven-Wilson the report of the Committee on Resolutions as amended was adopted in its entirety by the Association.

R. A. DENO, *Secretary*

Minutes of the Annual Meeting of the Executive Committee

Salt Lake City, Utah, August 14-15, 1953

1. It was moved by Daniels-Reese that the announcement from a member college received by the Secretary announcing a special program be referred to the American Council for Pharmaceutical Education for their information.

2. Hewitt-O'Brien moved that the report of the Secretary-Treasurer be approved and that a vote of thanks be extended to Secretary-Treasurer Zopf for his six years of service to the Association.

3. Reese-Hewitt moved that the Secretary-Treasurer be instructed to purchase \$5500 of series G Bonds from the cash balance of the Association.

4. On motion of Daniels-Parks the report of the Executive Committee as amended was approved for presentation to the Association by Chairman Burt.

5. On motion of Reese-Daniels, the Editor's report was approved for presentation to the Association.

6. In the absence of Dr. Deno, Chairman Burt reported that credentials had been received from 72 colleges representing a total of 256 delegates.

7. Chairman Burt presented a brief report on the meetings of the American Foundation for Pharmaceutical Education and of the Board of Directors of American Foundation for Pharmaceutical Education held in New York City April 6, 1953.

8. Reports from District meetings were made by the Officers of the Association. Officers reporting were:

Districts 1 and 2—Joseph B. Burt

Districts 3 and 8—Louis C. Zopf

Districts 4 and 7—Troy C. Daniels

Districts 5 and 6—Edward C. Reif

9. On motion of Hewitt-O'Brien, the Executive Committee approved the report of the Subcommittee on Membership recommending that the application for associate membership of the Western Massachusetts School of Pharmacy be disapproved, since the applicant does not appear to meet fully all qualifications for admission to membership as specified in Article I of the By-Laws.

10. It was moved by Daniels-Parks that the Executive Committee recommend the adoption of the proposal to amend Article VIII of the Constitution in order to give voting privileges to the President-Elect as a member of the Executive Committee.

11. It was moved by Zopf-Daniels that the Executive Committee approve the publication of a brochure on Pharmacy as presented in lay-out form by the subcommittee on brochure and authorized the appropriation of a sum not to exceed \$4500.00 for publication and distribution of 20,000 copies.

12. Deno-Parks moved that the report and Recommendations of the Subcommittee on Preliminary Planning for the 1954 Teachers

Seminar be approved in principle and transmitted to the Committee on Teachers Seminar on Pharmaceutical Education.

13. Chairman Burt reported that invitations had been received from the following member colleges for the 1954 Seminar on Pharmaceutical Education:

College of Pharmacy, University of Arizona
College of Pharmacy of the City of New York, Columbia
University
College of Pharmacy, Drake University
College of Pharmacy, University of Connecticut
College of Pharmacy, University of Michigan
School of Pharmacy, University of Wisconsin

As a result of the vote taken by secret ballot the College of Pharmacy, University of Connecticut was selected as the host school. On motion of Parks-Reese, June 27 to July 3 was selected as the date for the Teachers Seminar. (Note: this date was subsequently changed to the week immediately preceding the week of the National meeting. See item 6 of reorganization meeting of the group.)

14. The Executive Committee appointed Dean Harold G. Hewitt as chairman and the following members, representing the fields indicated, of the Committee on Teachers' Seminar on Pharmaceutical Education:

Harold G. Hewitt—Chairman
Arthur E. Schwarting—Pharmacognosy
Ewart A. Swinyard—Pharmacology
Louis C. Zopf—Pharmacy
Lloyd M. Parks—Pharmaceutical Chemistry
Stephen Wilson—Pharmaceutical Administration
Lloyd E. Blauch—General Education

Recessed—10:30

Reconvened—Alpine Rose Lodge—10:30 A.M.

15. Zopf-Lyman moved that the report of President Daniels be received and approved.

16. Zopf-Hewitt moved that the report of the President-Elect be received and approved.

17. On motion of Deno-Parks, the Executive Committee recommended (1) that Section 13 of Article I of the By-Laws be amended by deleting the second sentence which reads as follows: "Any such proposed change must be presented in the form and wording in which it is to be mailed to the member colleges and in which it is to be voted on at the subsequent meeting;" (2) that in the fu-

ture all proposals to amend the Constitution or By-Laws be cleared as to final wording with the Committee on Constitution and By-Laws; and (3) that the Committee on Constitution and By-Laws be instructed to submit to the Executive Committee prior to its next interim meeting (a) the necessary amendments to provide for such final clearance on changes and amendments and (b) the proposed amendments required to make possible the amendment of Article I of the By-Laws, or any portion thereof, without notice given at a preceding annual meeting but requiring a notice at least four months prior to the vote on the adoption of any such proposed amendment.

18. It was moved by Hewitt-Reese that the Chairman be authorized to recommend to the Association the amendment of Article XVII of the By-Laws to correct a typographical error in line three which now reads Section 12, correcting it to read Section 13.

19. On motion of Daniels-O'Brien, no action was taken on the proposal from the women's auxiliary, Alpha Zeta Omega, to establish an annual scholarship fund to be administered by the American Association of Colleges of Pharmacy because of lack of information regarding the details of the program.

20. Dean Joseph B. Burt was nominated as Director of the Foundation for Pharmaceutical Education to succeed Dean H. C. Newton whose term expires in 1953.

21. Dr. Deno presented the report and recommendations of the Committee on Libraries which was approved and a sum of \$750.00 was authorized for this committee's needs during 1953-54.

22. President Reif was requested to name two members of the American Association Colleges of Pharmacy to represent this Association on the Joint Committee on Libraries.

23. Discussion of ways and means to direct more qualified graduates into graduate work was led by Dr. Parks. Editor Lyman was encouraged to stimulate articles for the American Journal of Pharmaceutical Education on this subject.

24. Upon recommendation of Dr. Parks, the Secretary-Treasurer was authorized to speed up the roll call by omitting the total official title of each college and requesting a response with the word 'present', omitting the reading of the list of names of official delegates.

25. Daniels-Deno moved that questionnaires and surveys of all standing and special committees and officers of the Section of

Teachers of the American Association of Colleges of Pharmacy must be submitted to the Chairman of the Executive Committee for clearance before distribution and that such questionnaire may carry the statement of approval of the Executive Committee.

26. Chairman Burt presented a bid from the Nebraska Farmers Printing Company for printing of the Journal. Following careful consideration of the quotation the matter of investigating contracts for printing of the Journal was referred to the Committee on Publication with authority to act.

27. It was moved by Daniels-Hewitt that the Secretary-Treasurer write an abstract of the action taken by this Association during this meeting for publication in the Journal.

28. Dr. R. A. Lyman was reelected as Editor of the American Journal of Pharmaceutical Education.

29. Chairman Burt appointed the following members to a committee to develop topics for making more effective use of the district meetings:

Troy C. Daniels—Chairman
Richard A. Deno
Lloyd A. Parks

The committee was instructed to forward their recommendations to the Chairman of the Executive Committee who was authorized to distribute the topics and suggestions to the district officers.

30. The Executive Committee approved the sum of \$500 for use of the Committee on Audio-Visual Education which included \$250 for the Award in Audio-Visual Education for 1953-54. The approval of the \$250 for the Award was made without prejudice and does not imply the continuation of such a sum for this purpose in subsequent years.

31. The Executive Committee approved on motion of Reese-Zopf the payment of \$35.00 to each member of the Executive Committee other than President, Chairman and Secretary-Treasurer for subsistence for the two days of the Executive Committee meeting.

Recessed

Reconvened in the Pioneer Room—8:00 P.M.

32. Dr. George L. Webster, Chairman of the Special Committee on Committees presented the report of this committee which was received with sincere thanks of the Executive Committee for a big task well performed.

33. Chairman Heber W. Youngken, Jr. and Secretary-Treasurer Edward P. Claus of the Conference of Teachers appeared before the Executive Committee to discuss the problems of finance and reports of the Conference. Ideas were exchanged and approval of a system of distribution of income was discussed. On motion of Reese-Hewitt the sum of \$50.00 from Association funds was approved for use of the Council on Conference of Teachers.

34. President Daniels presented his thinking regarding the Repeal of the Durham-Humphrey Bill (Amendment to the F.D.C. Act) and was instructed to negotiate with Dr. Fischelis regarding information as to action of the American Pharmaceutical Association.

The Chairman of the Executive Committee was authorized to notify the dean of Southwestern State College, School of Pharmacy, that the Executive Committee looks with disfavor upon the conferring of an Honorary Bachelor of Science degree by any member school of the Association. (That also on motion of Deno-Reese).

On motion of Daniels-Hewitt the Secretary-Treasurer was instructed to write a letter to Dr. Sonnedecker expressing the Executive Committee's interest in his doctorate dissertation, however, endorsement of a request for funds would set a precedent which could not be maintained.

LOUIS C. ZOPF, *Secretary-Treasurer*

Minutes of the Reorganization Meeting of the Executive Committee

Salt Lake City, Utah, August 18, 1953

Held following adjournment of the 54th Annual Meeting, Hotel Utah, Salt Lake City, Tuesday, August 18, 1953, 4:25 p.m.

Present: Burt, Daniels, Deno, Lyman, Parks, Reif, Webster, Youngken, Zopf.

Absent: Hiner.

Chairman Zopf called the meeting to order to consider the budget for 1953-54 and a number of additional items of immediate significance as follows:

1. *Budget.* A budget proposed for 1953-54 was presented by the Chairman and there was detailed explanation and discussion of the various items under Estimated Receipts and Estimated Disbursements. On motion Webster-Burt the Committee voted to change item 3-c under disbursements from \$100 to \$200. The annual contribution to the ACE has been thus increased. After further amendments of certain other items, the budget on motion of Burt-Parks was approved.

2. *Miscellaneous items introduced incidentally as budget was discussed.* Most of these items concerned instructions to Secretary Deno and have been noted elsewhere for his guidance.

3. *Brochure expenses additional to appropriation covering initial printing of 20,000 copies.* Since no accurate estimate is possible on the number of copies of the brochure "Shall I Study Pharmacy" needed before the interim meeting, on motion Daniels-Burt the committee voted to authorize expenditure of funds for the printing of the brochure providing the committee on Brochure decided such expenditure was for the best interests of the Association, based on a conservative estimate of immediate additional needs for the brochure in the light of the exigencies of an emergency situation. Such funds are additional to those already appropriated and are not to be used to provide an excessively large reserve supply of the brochure.

4. *Bonding of Secretary-Treasurer.* At the request of the Secretary and on motion Parks-Burt the Secretary was authorized to arrange for bonds on himself commensurate with his financial responsibilities to the Association, to be paid from miscellaneous funds.

5. *Emergency signature of checks.* At the request of the Secretary and on motion Daniels-Webster the Committee voted to authorize signature of checks by the Chairman of the Executive Committee during the temporary absence from the country or inability of the Secretary to serve.

6. *Change of date for 1954 Seminar.* Reference is made to the resolution adopted on August 18, by the Association "that the Executive Committee (etc.—see bottom page 10 of resolutions)—," On motion Daniels-Webster the Committee voted to change the date

for the 1954 Seminar to the week preceding the date set for the APhA meeting.

7. *Interim meeting, 1953-54.* On motion Webster-Parks the Committee voted to hold this meeting in Chicago at such time in January as will permit a portion of the meeting to be joint with the members of the ACPE and the Chairman was directed to give special consideration to scheduling a meeting of sufficient length to permit also for adequate study of long-range plans as well as of the problems of more immediate concern.

8. *Vick Chemical Co. Research Fund.* Since it appears that this fund can be most serviceable if assimilated into the general funds of the Association, on motion Webster-Parks the Committee voted to direct the Secretary to take this action thus abolishing this fund as a separate one.

9. *Projected conference Zopf-Deno in Ann Arbor.* Since the Chairman must go to Storrs this fall on Seminar business and can arrange to confer with the Secretary enroute, on motion Daniels-Webster any minor additional expense incurred by this conference was authorized.

10. *Projected conference Zopf-Burt-Lyman in Lincoln.* In order to confer concerning the proposal to consider change of printer for the Journal if economically feasible, on motion Daniels-Youngken the expense involved in a trip to Lincoln by the Chairman for such purpose if deemed advisable by him was authorized.

11. *Request for suggestions re. annual meeting.* The chairman requested each member to carefully review the 1952-53 meeting as well as earlier ones and to come to Chicago in January prepared to present specific constructive criticism directed at the improvement of programs, procedure, arrangements, etc., of subsequent annual meetings.

12. *Instructions to Chairman, Committee on Committees.* Chairman Webster of this Committee requested information on the role of his Committee in making recommendations on duties of officers and special delegates. Past-President Daniels indicated that he had anticipated that such recommendations would eventually be made and the Chairman requested that this procedure be followed by Dr. Webster and his Committee.

13. *Further meetings on August 19, 20, or 21.* Members of the Committee remaining in Salt Lake City agreed to hold themselves in readiness for such call if the Chairman deemed it advisable.

The meeting was declared adjourned by the Chairman at 5:35 P.M.

R. A. DENO, *Secretary-Treasurer*

Again **The Journal** has been asked to help publicize the 1954 campaign for **The March of Dimes**. The progress made against polio, in the 16 years of the March of Dimes, is thought of in terms of Fronts. The First Front was directed toward basic research at a cost of \$20,500,000. The Second Front concerned aid to the polio patient. Direct financial aid has been given to 270,000 patients, at a cost of \$174,000,000. The primary objective of the Third Front was professional education. Manpower is an essential element of the fight against polio on every front. To exploit fully the weapons of science and medicine, The National Foundation helps train a potent striking force of skilled professional workers. It induces capable men and women to enter critically under-manned health fields by offering scholarships and fellowships and gives financial assistance to professional schools and professional organizations. The grants assisting the educational program have totaled \$16,200,000.

The objective of the Fourth Front which the Foundation is now opening is polio prevention. This strikes directly at the heart of the polio problem, namely, to extend protection against the paralytic disease to the greatest number of people and eventually to all people. The cost of polio prevention in 1954 is estimated at \$26,500,000 in March of Dimes funds. This will add 50 per cent to the over-all cost of operation of the National Foundation during the coming year. This we pharmacists should bear in mind when we make our pledges for the 1954 appeal.

The Editor's Page

The first meeting of the second century of organized pharmacy in the United States is now history. The meetings of the affiliated pharmaceutical organizations were characterized by an esprit de corps unequalled in any previous meetings which I have attended for almost half a century. A common spirit which seemed to pervade the membership of every organization implied a sympathy, an enthusiasm, a devotion, and a jealous regard for the honor of the profession of pharmacy as a whole.

Undoubtedly the good people of Salt Lake City had a great deal to do with the atmosphere that pervaded the various meetings for, on Sunday night of the convention week, they presented a program in the great Mormon Tabernacle by the famous Tabernacle Choir which gave the whole convention program a distinctly religious setting. Both the enthusiasm and the sincerity manifested in that program will long be remembered and was a most fitting beginning not only for the current convention but for the beginning of a new century of organized pharmaceutical service. It was an inspiration for greater devotion to our tasks in the years that lie ahead. The meetings were notable for the absence of anyone who voted "No" for any suggested program that would better prepare the pharmaceutical student for citizenship or for professional practice and no one seemed to think it was "undemocratic" to insist on such a program. These may seem like little things, nevertheless, they indicate a changed trend in mass thinking. In a few words, the spirit of all the meetings may be characterized by the sentence—"The forward look".

The officers and the committees of the various organizations did a marvelous job of integrating the programs of the Summer Seminar on Pharmacognosy, the Plant Science Seminar, the sessions of the AACP including the Conference of Teachers, the sections of the APhA and the programs of the affiliated organizations, plus the entertainment features in such a way as to reduce the conflicts to a minimum. Of course, where there are so many organizations involved, it is impossible to arrange a program which will completely eliminate conflicts, but there is less loss by integration than there

would be if the various organizations held independent meetings in different locations and at different times and it is much less expensive and there is less loss of time. Furthermore, there is momentum and inspiration in "bigness" provided the individual is not submerged and lost in the mass. There is little danger of this since our organizations are divided into sections representing various fields of specialization and having various objectives. The Salt Lake City meetings set a pattern which will be helpful in planning programs in the years to come.

To the Editor was given the honor of pronouncing the invocation at the opening of the Tabernacle Choir concert on Sunday evening. When one prays in secret in his own closet for his own help and guidance, it is easy for he knows his own needs. It is a matter of asking his Heavenly Father for help as he would ask his earthly father for guidance. Being a human being he can do nothing else. But when one prays in public he must remember that the people in the audience have needs of which he may not know. In the Lord's Prayer, Christ taught us an all inclusive prayer that the whole Christian world has been repeating for twenty centuries. On special occasions, however, there are special needs and objectives to which one must give cognizance. This I attempted to do. During the week that followed, many friends asked me for a copy of the invocation and finally several asked me to print it. This I consented to do. The invocation follows:

"Our Father who art in Heaven, hallowed be Thy name.

"Thou who didst create the Heaven and the Earth, who brought light out of darkness and land out of the waters and didst establish every living thing upon the earth.

"Who did, in Thine own way, create man in Thine own image; male and female, created Thou them.

"The world and all that dwell therein are Thine.

"In the beginning Thou didst command man to be fruitful and multiply and replenish the earth and subdue it; and have dominion over the fish of the sea and the fowl of the air and over every living thing that moveth upon the earth.

"With the passage of time we have come to realize that that command was all inclusive and meant that man should have dominion, not only over the inhabitants of the sea and air and land but over the sea and air and land themselves, as well as over time and space and disease and over our own wilful natures.

"Specifically, for the accomplishment of the last two named objectives, we have assembled in this beautiful city from every corner of our land that we may council one with the other.

"In a world of turmoil, our Father, we plead for Thy guidance.

"As the hart, after the chase, panteth after the water brooks, so now our souls panteth after Thee, O God.

"Teach us, O Lord, the way of Thy statutes and help us to keep them unto the end.

"Give us understanding that we may keep the law.

"Make us to go in the path of Thy commandments, for therein is delight.

"Incline our hearts unto Thy testimonies, and not to covetousness.

"Turn our eyes from beholding vanity and quicken us in Thy way. We plead for help to make us walk uprightly and work righteousness, and speak the truth in our hearts and not backbite with our tongues or do evil to our neighbors or take reproach against them.

"When we walk through the shadows of the valley may we have the faith that little children have in their parents and place our hands in Thine for comfort and guidance.

"As we stand on the threshold of the second century of organized pharmacy in our country, facing a new horizon, may we have the vision and the courage to complete our tasks comparable to that which the pioneer leader of this great people had when he stood in the mouth of the canyon with the valley in plain view and said, 'This is the place'. And may we have the courage his followers had when against the greatest of odds, they made the desert blossom as a rose.

"And when we approach our journey's end may each of us be able to say as St. Paul said, 'I have fought a good fight, I have finished the course, I have kept the faith'.

"This we ask, our Father, in the name of Thy son, whom Thou did send to earth twenty centuries ago, that men might know Thy purposes, and know the greatness of Thy love, and forever may the glory be Thine. Amen."

There was one shadow that dimmed the horizon during the Salt Lake meetings. The shadow was caused by a few stories told on various occasions that left a bad odor in their paths. Not only were they objectionable but they, to me, were pointless. I confess being mostly English by ancestry, it takes some time for me to see a point. Perhaps the point will emerge later. However dissatisfaction was expressed by many people who felt the stories lowered the moral tone of the convention. During the week following the convention I rode over miles of highway in the state of Idaho. A legend that was repeated over and over on the cement highway read, "Keep Idaho

green." The people who live in Idaho know the danger to their magnificent forests of the unsmothered match, the cigarette, and the dying embers of the camp fire. Little fires grow into big ones. Stories with shady implications told at conventions cannot be confined. Sooner or later they reach the class room or the listening public where they can serve no useful purpose and only lower public regard for the profession. We may well paraphrase the Idaho legend by saying, "Keep the profession of Pharmacy clean". It will be conducive to better public relations and create greater respect for the profession.

The Utah Health Council is an organization that is non-political, having no connection with and receiving no financial support from the state or any municipal sources. It has as its objectives the dissemination of information concerning health problems to the citizens of the state and the promoting of public relations with the health agencies within the state.

During the convention in Salt Lake fifteen persons representing the various aspects of pharmacy were asked to participate in the Council's radio or TV programs over Station KVTU. Tape recordings were made and will be run by the station from time to time during the year.

The Council's activities are supported financially by the Utah State Medical Association and the Utah State Dental Association but I understand the pharmacists of the state are planning on lending their support in the near future. It would seem that the health professions in Utah have found a commendable way to promote public relations free from political influence and with no drain upon the taxpayers of the state. The address of the Utah Health Council is 309 Darling Building, Salt Lake City, and the Director of Public Relations is Mr. Raymond L. Servatius.

The most stimulating action that took place in the Salt Lake meeting of the AACP was the passage of a recommendation, with apparently no opposition, requiring one year of college training in addition to high school graduation for entrance to a college of pharmacy, effective in 1965. The NABP, in session at the same time, made the same requirement for the practice of pharmacy, effective

in 1957. This action on the part of the Boards is a continuation of their record of half a century of supporting the action of the colleges in every forward educational movement and in some cases of beating them to it. We have always maintained that leadership in education is a prerogative of the colleges but when the colleges are too timid to take a gamble, we are grateful to the Boards for their boldness in leadership and superior sportsmanship.

One of the pleasant surprises the Editor had when he came home from Salt Lake was a note on his desk which read:

"My Dear Dean of Deans:

"If my mental calendar is in order, you are now in Salt Lake manipulating your wires of pharmaceutical wisdom.

"A few days ago while clearing out a personal file, I found a notebook of 1894. The enclosed pages containing the personnel of Company C of the University Cadets have been extracted in order that you might recall the days that were so long ago.

"With all good wishes for the days ahead, I am Sincerely yours". The note was signed with a familiar flourish, "Edward C. Elliott".

The pages referred to were discolored from age. They bore distinctly, among others, the names of Sergeant Edward C. Elliott and buck-private, Rufus A. Lyman. The pages brought back memories of those days when the most gorgeously uniformed person I have ever known, then First Lieutenant John J. Pershing of the United States Cavalry, was at that time Commandant of Cadets at the University of Nebraska. But the note did more than that; it also brought to mind what we in pharmaceutical education owe to Edward C. Elliott for his vigorous and intelligent prosecution of The Pharmaceutical Survey in these later years. We missed his presence at the Salt Lake meetings but we did not forget the service he rendered to pharmaceutical education and practice. May his days be long to enjoy the fruits of his labors in many fields.

Again the grim reaper has been in our midst and has taken from us the beloved Dean Robert L. Crowe of the University of Tennessee. We extend our sympathy to his family and as always find comfort in the record as written in the second verse of the sixteenth chapter of the Gospel according to St. John which reads, "In my Father's house there are many mansions; if it were not so I would have told you. I go to prepare a place for you." Christ's own promise of immortality.

RUFUS A. LYMAN

Notes and News

University of Arizona.—Dean W. R. Brewer attended the Teachers' and the Plant Science Seminars at Salt Lake City in August. Two of the papers presented were "Integration of Natural Product Study with the Subject Matter of Other Professional Courses", and "Belladonna from a Phytochemical Viewpoint".—A new office for the Dean and a new laboratory for manufacturing pharmacy have been completed during the summer months.

University of Buffalo.—Dr. LeRoy C. Keagle has resigned from the staff and is now with the Werner-Chilcotte Company of New Jersey. Dr. Daniel H. Murray has succeeded him on the staff. Dr. Murray has also been appointed assistant dean.

Butler University College of Pharmacy.—Sixty-seven students were graduated at the June commencement and eight at the end of the summer session.—Ted Ballard, a June graduate, has been appointed to a pharmacy internship with the United States Public Health Service.—Sylvia Schmidt, a senior pharmacy student, was chosen as a Coed Counselor. The Counselors help incoming freshmen women to become acquainted with college life by correspondence during the summer months and meeting them for private interviews and group meetings.—Dean Karl L. Kaufman and Dr. Bert Mull appeared recently on a television program over WFBM, Indianapolis. They discussed the topic, "Opportunities in a Profession of Service".—Wallace Rutherford has been appointed an instructor in pharmacy.—Three graduate assistants have also been appointed. They are: William Schobel in pharmacy; Austin Dulin in pharmaceutical chemistry; and Glenn Kiplinger in pharmacology.—Dr. John W. Martin spent four days at the meeting of the American Chemical Society in Chicago.—After six years of service, Dr. Lloyd O. Poland has resigned as professor of chemistry and has gone into retail pharmacy.

University of Southern California.—The entire full time staff of the school attended the APhA convention in Salt Lake City. Several of them served as chairmen and members of committees.—Profs. Catherine Kirchner, Paul Kalemkarian, Willard Smith, John Biles, Glenn Hamor, and C. M. Moser attended the Plant Science Seminar.—A large delegation of students also attended the APhA convention and returned full of enthusiasm over the prospects of having a student section formed as a part of the Association.—Dr. John Bester has joined the staff as assistant professor of pharmacology. He received the doctorate from Ohio State University and was formerly teaching at Ferris Institute.—Seventy-two students entered their first professional year this fall. An orientation assembly was held for them on September 15.—The fifteen

new directors of the alumni association held a dinner meeting recently for the election of officers for the current year. C. M. Moser of La Canada was re-elected president; Logan Fox of Fresno, vice-president; Frank Titus of Alhambra, secretary; and Charles Swiggett of Los Angeles, treasurer.—President Moser reported that approximately two-thirds of the \$100,000 fund for the school of pharmacy has been pledged during the first ten months of the campaign, and stated his belief that this evidence of alumni interest in the school was an important factor in restoring class A-rating to the school following the recent Council inspection.—Faculty members are cooperating with alumnus Art Tog-nini in arranging a display on professional pharmacy for the Kern County Fair to be held at Bakersfield, September 26 to October 3. It is hoped that a permanent portable exhibit for professional publicity will evolve from this project.

University of Colorado.—Robert W. Goettsch has been appointed as instructor in pharmacy. He is a Colorado graduate who received the master's degree in 1953, after completing a joint program of graduate study and internship in hospital pharmacy at the State University of Iowa.—C. Dwayne Ogzewalla, who received the B.S. and M.S. degrees in botany and pharmacognosy at the University of Utah where he also served as an assistant in botany while completing his graduate study, has been appointed a part-time instructor in pharmacognosy.—Mont H. Gutke has been granted a renewal of his Teaching Fellowship Award in the field of pharmacy administration for the year 1953-54 by the American Foundation for Pharmaceutical Education.

University of Connecticut.—James E. Dusenberry, a graduate of the college of pharmacy of the University of Nebraska who also holds a master's degree from the graduate college, has been awarded a graduate fellowship in pharmacognosy at the University of Connecticut by the American Foundation for Pharmaceutical Education.—The college of pharmacy began its 29th year with an enrollment of 317 undergraduate and 18 graduate students. Of the graduate students two are Fellows of the American Foundation for Pharmaceutical Education. They are James Dusenberry and Henry Eisen, the latter from Rutgers. Three are giving service as assistants. They are: Harold Beal from the University of Buffalo; LeRoy Beltz from the University of Nebraska; and Ara Paul from Idaho State College. Six are graduate assistants. They are F. J. Cassella from Adelphi College; Eugene Greenblatt from Long Island University; Joseph Moody from the University of Connecticut; Norbert Raska from the University of Buffalo; and Bryant Fitzgerald and Arnold Urdang, from Columbia University. The other graduate students are David Burack and James O'Brien from the University of Connecticut; Mrs. Natividad de Castro from the University of the Philippines; Edward Eugers from Wayne University; George Lehrman from Purdue; Joseph Powers from Massachusetts College of Pharmacy; and S. S. Warawdekar from the University of Bombay.—Eighteen scholarships awards have

been made to undergraduates.—The additional wing of the new building has been completed and the equipment has been installed. A new greenhouse has been completed and readied for operation and the herb garden which was seeded earlier in the season is now in readiness for teaching purposes.—One Ph.D., three M.S., and 54 B.S. in Pharm. degrees were granted at the June commencement. In the latter group, two were graduated with high honors and four with honors. Among the masters, William J. Kelleher is entering the Marine Officers Training School; Ara G. Paul has been appointed assistant instructor in pharmacognosy and is continuing study for the doctorate; and Edmund S. Granatek is now with the Bristol Laboratories, Syracuse, New York. Receiving the Ph.D. degree was Varro E. Tyler who has been appointed assistant professor of pharmacognosy at the University of Nebraska.

Creighton University.—Mrs. Edmund (Ann) Czerwinski presented a paper on the "Philosophy of Pharmacy Operation" at the spring meeting of the Midwest Hospital Pharmacists' Association in Kansas City. She also presented a paper on "Pharmacology of New Drugs" at the Catholic Hospital Association convention in the same city in May.—Dr. Nikolaus Hansel presented a paper on "The Importance of Basic Science in the Pharmaceutical Curriculum" at the meeting of District No. 5, AACP and NABP.—Edmund Novak has resigned as instructor in the biological sciences in order to study medicine in the Creighton Medical School.—Dr. Clifton F. Lord attended the Institute in Hospital Pharmacy at Loyola University in Los Angeles in June. Dr. Lord is program chairman for the Section on Hospital Pharmacy of the Nebraska Hospital Association. He will also address the general assembly of the convention at its annual meeting in Lincoln in November on the subject "The Role of the Pharmacist in the Modern Hospital".

University of Florida.—One of the students, Howard J. Schaeffer, working for the doctorate, is doing his research at the Oak Ridge Institute of Nuclear Studies by special arrangement with the University of Florida. His field of interest is the application of radioactive elements in the study of synthetic medicinals.—Dr. Shafik I. Balbar, who received the Ph.D. from Florida, has been commissioned by the government of Egypt to make a study of the medicinal plant gardens of this country.—At the June commencement the following students were awarded the doctorate: Betty Lankford McLaughlin, now in Washington, D.C., with her husband; Louis Delwin King, now assistant professor of pharmacy at Rutgers; and Esteban Nunez Melendez, who has resumed his duties at the University of Puerto Rico as assistant professor of pharmacognosy.—The following were granted the doctorate in August: Shafik Ibrahim Balbar, who will in the near future return to Egypt to teach pharmacognosy at Foud I Univeristy in Cairo; James Mylan Crampton, now assistant professor of pharmacology at Xavier University; Durward Neal Entrekin, now research associate with E. R. Squibb & Sons; Seldon Dick Feurt, now associate professor of pharmacology,

School of Pharmacy, University of Georgia; Oliver Mersilius Littlejohn, now assistant professor of pharmacy, Southern College of Pharmacy.

University of Georgia.—Dr. Seldon D. Feurt has been appointed to the staff as assistant professor of pharmacology after having completed his work for the doctorate at the University of Florida.—Instructor Charles W. Hartman is on leave for the current academic year pursuing graduate work at the University of Florida.—Presidents of the student organizations for the present year are: Student Branch APhA, Joel Hardman; Rho Chi Honor Society, Charles W. Merritt; Kappa Psi, Randall Maret; Phi Delta Chi, Howard Branch.—Four students received commissions in the Medical Service Corps and two in the Air Force at the June commencement.—Four pharmacy students, among 100 outstanding Georgia high school seniors, received freshman scholarships for the 1953-54 year. The scholarships were set up recently by the officials of the University to assist superior students secure a university education. Each scholarship amounts to \$180. Winners are selected on the basis of high school grades and activities, objective tests, character and maturity, and educational purpose in terms of what the applicants intend to study in college and of aims after graduation.

University of Houston College of Pharmacy.—Drs. Robert L. Boblitt and Gail Stapleton, both appointed as professors of pharmaceutical chemistry are new members of the staff. Dr. Boblitt holds the degree B.S. in Pharm. from Ohio Northern University and the doctorate from the University of Minnesota. He served in the Marine Corps in the Pacific Theater from 1943-1946. Dr. Stapleton holds his degrees in pharmacy and pharmaceutical chemistry from the Washington State College. He served in the Navy in the Pacific Theater from 1942-1945. He has also studied at the University of Washington and at Purdue.—Mr. Louis F. Kondelik, instructor in distributive education in the college of business administration is teaching Drug Store Business Methods in the college of pharmacy. Mr. Kondelik has the master's degree in Distributive Education from the State University of Iowa. He attended the Walgreen Seminar in Drug Store Management in Chicago early in the summer.—Dean N. M. Ferguson, Drs. George Webber, Don and Ruth Kroeger, and Mrs. Sue H. Rouse attended the meetings in Salt Lake City, the week of August 16. Dean Ferguson also attended the Plant Science and Teachers' Seminars.

Howard College, Birmingham.—Fifteen students completed requirements for the bachelor's degree in August.—Following a recent inspection by the American Council on Pharmaceutical Education, the college was given "A" classification.—Dr. A. H. Olive, associate professor of pharmacy and pharmacognosy since 1934, died June 12.—Dr. Lamar B. Dale, Jr., associate professor of pharmacology, has resigned to take a position with the William S. Merrill Company.—Dr. Jack T. Bryan, formerly with the Research and Development Division of Merck and Company, Inc., has joined the faculty. Dr. Bryan received the B.S. degree

from Howard College and the master's and doctorate from the University of Florida.—Dr. Byrum attended the Teacher's Seminar on Pharmacognosy at Salt Lake City in August.—The annual seminar for retail pharmacists which is sponsored by the Alabama Pharmaceutical Association and the schools of pharmacy in Alabama will be held at Howard College on November 18. Dr. Paul C. Olsen will be the guest speaker.

Idaho State College.—Mrs. Cisco Kihara served as a delegate to the Rho Chi convention at Salt Lake City in August.—Mr. Dale Tanner attended the recent Walgreen Seminar in Drug Store Management in Chicago.—Drs. Otto Rahn and P. G. Jarvis presented papers at the recent meeting of the Society of American Bacteriologists in San Francisco.

University of Illinois.—Dr. Ralph F. Voigt, who has been a member of the staff since 1939, has been advanced in rank from associate to full professorship of pharmacognosy and pharmacology and as such will administer the duties of that department.—Mr. Dale W. Doerr has been promoted to the rank of instructor in pharmacy.

State University of Iowa.—Dean Emeritus R. A. Kuever resumed his position as professor of pharmaceutical chemistry on July 1 after being on leave of absence during the prior year.—Dean Emeritus Wilber J. Teeters attended the 60th annual reunion of his class at Mr. Union College in Alliance Ohio, in June. He was also honored at an alumni dinner given by Sigma Alpha Epsilon fraternity, at the local and national levels. He was commended for his work in installing a chapter on the Iowa campus and for his long service in civic work, Boy Scout leadership, and as state toxicologist.—The College of Pharmacy will sponsor a Pharmacy Seminar on November 13-14. The purpose of the Seminar is to review the effects of recent narcotic, barbiturate and other habit-forming drug legislation, the problems of illegal sales and the consequences of the misuse of drugs. Dermatological preparations and special prescription problems will also be discussed.—Nineteen graduate and undergraduate fellowships and scholarships have been awarded for the current academic year. These are given by six different donors. In addition, Hospital Pharmacy Internships (half-time graduate work) were awarded to two students. Fourteen prizes and awards were granted at the close of the 1952-53 school year for outstanding scholarship and university activities.—New graduate assistants for the current year are: James W. Conine; Dale H. Cronk; Seymour M. Blang, Ronald E. Orth; and Kanak Ravel.

University of Maryland.—Mr. Carl Kaiser and Mr. Bernard Misek received the master's degree at the June commencement.—Dr. Frank J. Slama attended the Teachers' Seminar in Pharmacognosy at the University of Utah in August.—Dr. B. Olive Cole represented the Baltimore branch of the APhA at the annual meeting and Dr. Arthur Purdum moderated a panel, Hospital Pharmacy Internships, in the Salt Lake meeting of the American Society of Hospital Pharmacists.—Twenty-nine graduates, former students, former and present faculty members

and their wives attended a Maryland luncheon at the Utah Cafe on August 20.—Two hundred and seventy-four students were registered at the beginning of the fall semester. This number included 69 new matriculants and 36 graduate students.—New instructors on the staff for the current year are Paul A. Pumpian, B.S. in Pharm. and LL.B., University of Maryland, formerly graduate assistant in botany and pharmacognosy and last year junior instructor in pharmacy administration, now appointed as assistant professor of pharmacy administration; William M. Heller, B.S. in Pharm., University of Toledo, Johns Hopkins Hospital Intern, 1949-51, Fellow of the American Foundation for Pharmaceutical Education in 1951-52, M.S. degree University of Maryland in 1951, named as instructor in pharmacy; Jordan Kaufman, B.S. in pharmacy, University of Connecticut, was recipient of a fellowship at the University of Texas 1952-53 and received the M.S. in Pharmacy from that institution in August 1953, appointed as junior instructor in pharmacy administration and pharmacognosy. The following graduate assistants have been appointed, all having the B.S. degree: Oscar S. DePaola from the Rhode Island College of Pharmacy and Allied Sciences, in chemistry; Mario D. Aceto, from the same institution, in zoology; Phillip A. Oullette, from Massachusetts College of Pharmacy, in pharmacy; Phillip Portoghese, in chemistry; Tully J. Speaker, from Rutgers, in pharmacy; Francis A. Veltse, from the University of Maryland, in bacteriology; Edward B. Brucker, in physics; and John Roskos, Jr., from the Southern College of Pharmacy, Inc., in pharmacology.—Seven of the June B.S. graduates have been inducted into the Armed Service. Also Albert W. Kossler, M.S. in June, is in the Armed Service.—Robert E. Lawson, M.S., 1953, has taken a position as pharmacist in a Denver hospital awaiting a call to military service.—Bernard Misek, M.S. 1953, is a research pharmacist with the Ciba Company, and Andrew Bartilucci, Ph.D. in June, is associate professor of pharmacy and assistant to the Dean in St. Johns University, New York.—Two scholarships from the American Foundation for Pharmaceutical Education and one from the Read Drug and Chemical Scholarship Fund have been awarded to undergraduates.

Massachusetts College of Pharmacy.—Dr. John W. Schemerhorn, who received his undergraduate instruction at Rutgers and the doctorate at the University of Minnesota and who has been a member of the George Washington University staff for the past four years, has joined the staff as assistant professor of pharmacy.—Dr. Howard J. Jenkins comes to the faculty from the Pharmacological Research Laboratories of Armour & Company. Dr. Jenkins received his undergraduate training at the University of Michigan and the doctorate from Ohio State University.—Fourteen members of the faculty attended the meetings of the American Pharmaceutical Association and affiliated organizations in Salt Lake City in August.—A total of 32 scholarship awards have been made to undergraduate students for the session of 1953-54. Fourteen

fellowships have been awarded to graduate students.—A major building improvement completed during the summer was the installation of new lighting in George Robert White Hall, the reading room of the Sheppard Library. This was accomplished without detracting from the famed architectural beauty of the ceiling.

University of Minnesota.—Fifty-one seniors were graduated at the June commencement.—The Board of Regents have approved a minimum 1-4 course in pharmacy, effective with the fall quarter of 1954.—The following three students received the doctorate during the summer and have accepted the positions indicated: Robert Appel, Howell Laboratories, Blaudette, Minnesota; David Greeg, Upjohn Laboratories, Kalamazoo, Michigan, and Robert L. Boblitte, University of Houston.—Majro William C. Luekes, who is in charge of the Pharmacy ROTC program, received the master's degree in June.—Harold J. Rhodes, who has completed work for the doctorate, has accepted a position with Duquesne University School of Pharmacy.—New graduate teaching assistants for the current year are Jack Cole of Arizona, Cary Omodt of Minnesota, and Bernard Festelberg of Massachusetts.

University of Mississippi.—Thirty-seven students were registered in the second term of the summer session.—Dean E. L. Hammond returned from his navy cruise aboard the U.S.S. Macon on August 8.—Dr. and Mrs. J. Hampton Hoch, of the Medical College of South Carolina, were recent campus visitors.—Robert L. Vick, '52, has completed work for the master's degree with a major in pharmacology and has accepted an instructorship on the pharmacy staff. During the last semester of 1952-53 he was an instructor in pharmacy at the Southwestern State College, Weatherford, Oklahoma.

University of Nebraska.—The college of pharmacy and the graduate college have announced a combined program of graduate study and internship in Hospital Pharmacy on a cooperative basis with the Lincoln General and the Bryan Memorial Hospitals. The Hospital Pharmacy curriculum consists of courses at the graduate level in hospital pharmacy administration, advanced manufacturing pharmacy, biochemistry, physical chemistry, biological products and endocrinology. Applicants must possess the B.S. degree from an accredited college of pharmacy and present qualifications acceptable to the graduate college. A limited number of internships in hospital pharmacy have been provided by the Boards of Trustees of the cooperating hospitals, requiring half-time service extending over a two-year period calling for eleven months of service each year. The stipend amounts to \$1200 annually. Upon the successful completion of the approved program, the University of Nebraska will confer the Master of Science degree and the Boards of Trustees of the sponsoring hospitals will award a certificate of Internship in Hospital Pharmacy upon completion of the two-year period of internship.—Dr. Harald G. O. Holck attended the meeting of the Federation of American Societies for Experimental Biology in Chicago in April, and the Nineteenth International Physiological Congress and In-

ternational Meeting of Pharmacologists in Montreal, Canada, in September.—Mr. Hugh Bryan attended the annual meeting of the American Animal Health Pharmaceutical Association in Omaha in April. He was appointed as a member of the Committee on Education of the Association. Mr. Bryan has been granted leave of absence for the year 1953-54 in order to accept a position in the laboratories of the Smith-Dorsey Division of the Wander Company in Lincoln.—Dr. Varro E. Tyler, Jr., has been appointed as associate professor of pharmacognosy and chairman of the department. Dr. Tyler had his undergraduate work at Nebraska and continued graduate work at the University of Connecticut where he was awarded the master's and the doctorate degrees, majoring in pharmacognosy. He assumes the teaching duties formerly carried by James E. Dusenberry who is now pursuing graduate studies at the University of Connecticut under an American Foundation for Pharmaceutical Education Fellowship.—Dr. Frank P. Cosgrove has been appointed associate professor of pharmacy. Dr. Cosgrove completed his undergraduate training in pharmacy at Notre Dame. He has the master of science degree in pharmacy from the University of Colorado and the doctorate from Ohio State University. He has had four years experience in industrial pharmacy and five years of teaching experience at Southwestern State College, Oklahoma, and Loyola University, New Orleans.—Paul A. Landolt, formerly of the staff of Scottsbluff Junior College, has been appointed as instructor in physiology.—Dean J. B. Burt attended the meeting of the Mid-Western Conference of Pharmaceutical Associations in Kansas City in June and on June 16, he spoke on "Pharmaceutical Education in the Future" before the Diamond Jubilee meeting of the Missouri Pharmaceutical Association in the same city.—Dean Emerits Rufus A. Lyman spend the week of May 11, as guest lecturer at the College of Pharmacy, University of Washington at Seattle.—Four students were graduated at the August commencement.—Plans for the new pharmacy building are now in the office of the chairman of the Department of Architecture. Actual construction is expected to start in the near future.—Dean J. B. Burt and Dr. V. E. Tyler, Jr., attended the Pharmacognosy Seminar at Salt Lake City preceding the affiliated pharmacy meetings in August.

University of North Carolina.—Fifteen graduate and 240 undergraduates are enrolled for the current academic year.—The University has converted permanently to the semester system.—Twenty-two special pharmacy undergraduate scholarships, ranging in value from \$200 to \$275 and totaling \$4875, have been awarded on a combined basis of maintained scholarship and need for the school year.—John Andrako, Ph.D., '53, has been promoted to the rank of assistant professor.—Ben F. Cooper, M.S., '51, and Wesley T. Collier, B.S., '49, have registered in the graduate school.—Messrs. Cooper, Ed. C. Kimsey, and Geo. R. McLure are new recipients of American Foundation for Pharmaceutical Education Fellowships.

University of New Mexico.—Twenty-six students were graduated on June 2, with the bachelor's degree.—All faculty members presented papers at the APhA Salt Lake City convention. Two students, Edgar Lee Hunt and Alan Aldous, also attended the convention.—Dr. George L. Baker has been appointed to the position of assistant professor of pharmacy. Dr. Baker was formerly head of the department of pharmaceutical chemistry at the University of Toledo.—Dr. Raymond N. Castle has returned from sabbatical leave. Last year he was at the University of Virginia engaged in research with Dr. Alfred Burger.

University of Oklahoma.—The graduate program has been broadened by offering a master's degree in pharmacology. Graduate work is also offered in pharmaceutical chemistry, pharmacognosy, and pharmacy. All departments are supervised by faculty members who hold the doctorate in their respective fields.—Prof. Dale Cronk, assistant professor of pharmacy, has been awarded an American Foundation for Pharmaceutical Education Fellowship for study at the State University of Iowa while on leave from Oklahoma.—Prof. Blanche Sommers is resuming her duties as associate professor of pharmacy after a year's leave of absence while attending Ohio State University where she is working toward the doctorate.

Oregon State College.—Again the school has participated in the scientific exhibit at the annual session of the Oregon State Medical Society in October. This was in conjunction with the 18th Sommer Memorial Lectures. The pharmacy exhibit was entitled "Pharmaceutical Preparations". The school also had a display at the Oregon State Fair at Salem depicting the history of antibiotics.—Prof. Leo A. Sciuchetti has returned to the staff after one year sabbatical leave devoted to graduate study at the University of Washington.—Dr. Daniel Tsao has also returned to his duties here after having spent the summer engaged in research at the University of Washington.—Dr. R. S. McCutcheon represents the school of pharmacy on the graduate council during the present school year.—Prof. H. C. Forslund who is chairman of the college Admissions Committee has also been named Head Counselor for students of pharmacy.

Philadelphia College of Pharmacy and Science.—Dr. Horatio C. Wood, Dr. Karl Scholz, and Profs. Edmund H. McLaughlin and John A. Novack announced their retirement from the faculty at the conclusion of the last school session.—Prof. Grafton Chase spent six weeks during the summer taking the special course offered in Atomic Energy at Oak Ridge.—Four new members have joined the faculty this fall. They are Dr. Constantine A. Apostolides, in biology; Dr. L. W. F. Lee, in physics and mathematics; Dr. W. F. Erdman in pharmacology; and Mr. Ernest H. H. Davis, in the languages.—Over 150 freshmen students entered the college in September.

University of Pittsburgh.—The Alpha Omicron Chapter of the Rho Chi Society recently installed a display in the Farmers Bank Building

in Pittsburgh, commemorating 75 years of service to pharmaceutical education. The display, conceived in its entirety by student members of the chapter, was built and installed with students, faculty, and alumni cooperation. The display windows in the Farmers Bank Building are of historical importance in themselves. Weekly displays are installed in these show places on one of the busiest corners in the Golden Triangle of Pittsburgh. Each week features, first, an exhibit on one person's hobby in a special window called the "Hobby Theatre"; second, a display of some important manufacturing process in the Greater Pittsburgh area; and the third window is used for a public service project, or historical commemoration. Rho Chi's display contrasted the pharmacy of 75 years ago with pharmacy as it is practiced today. The exhibit featured antique drug jars from the collection of Louis W. Yagle, prominent Pittsburgh pharmacist and an alumnus of the school. Shown with the drug jars were the newest in balances; dosage forms; and special containers. Contrasting the old and the new in microscopy were an early microscope of 1847 and the newest model, both of which were loaned by the American Optical Company, makers of such equipment. The exhibit aroused much favorable comment from the public and served to point out again the celebration of the 75th anniversary of the founding of the University of Pittsburgh School of Pharmacy in 1878 as the Pittsburgh College of Pharmacy.—Dr. Robert A. Moore, at present dean of the medical school of Washington University, St. Louis, has been named vice-chancellor in charge of the school of the health professions at the University of Pittsburgh effective in the early spring. In the new position, Dr. Moore will coordinate teaching, research and patient care in the hospitals, clinics, and professional schools of medicine, dentistry, pharmacy, nursing, and public health. He will be responsible for the development of adequate facilities; selection of distinguished faculties for the five professional schools; development of strong education and research programs; extension of post-graduate medical education throughout the Pittsburgh district; integration of the five professional schools with one another and with other important divisions of the University and with the work of associated hospitals and clinics; and assistance in obtaining funds to carry forward the program of education and research.

Purdue University.—Robert Kashner, '47, has been appointed administrator of the Mary Rutan Hospital at Ballefontaine, Ohio.—William D. Jones, Ph.D. '48, is now in the Sales Development Division of Rahn and Hass Co., West Chester, Pennsylvania.—Joseph B. Vaughan, M.S. '39, is chief chemist at Lloyd Brothers, Cincinnati, Ohio.—Arthur J. McBay, Ph.D. '48, has been advanced to associate professor of chemistry at the Massachusetts College of Pharmacy, and is research consultant to the department of legal medicine of the Harvard Medical School.—James A. Campbell, who completed his work for the doctorate in August has been appointed as assistant professor of chemistry at the University

of South Carolina.—Ralph Banziger completed work for the doctorate with a major in pharmacology during the summer session and has been appointed as assistant professor of pharmacology at the University of North Dakota at Fargo.—Norris W. Durham, a graduate student majoring in pharmacology, has been appointed as assistant professor of pharmacology at Ferris Institute.—Robert V. Evanson, who completed work for the doctorate with a major in pharmacy administration last summer, has been advanced in rank as assistant professor of pharmacy administration. During the past year he held a teaching research fellowship from the American Foundation for Pharmaceutical Education.—Robert E. Sante, who completed work for the doctorate in pharmacy during the summer, is now with the Irwin, Neisler Company of Decatur, Illinois.—Gunnar Gjerstad, a graduate student majoring in pharmaceutical chemistry for the doctorate, has accepted a position as instructor in pharmacognosy at the University of Texas for the year 1953-1954.—The following appointments to general university faculty committees have been made by the president of the university: Glenn L. Jenkins, chairman of the Faculty Promotions Committee; Dr. G. E. Cwalina, chairman of the Student Publications Committee and a member of the Library Committee; Dr. John E. Christian, chairman of the Radiological Committee and member of the Nucleonics Committee. Profs. John B. Data, Egil Ramstad, and Glen J. Sperandio, are members of the Standards in English Committee, the Advisory Committee on Foreign Students, and the Safety Committee, respectively.

Rutgers University.—Dr. John Voight, formerly at the University of Mississippi, has assumed the directorship of the Pharmaceutical Extension Service taking the place of Prof. Louis Kazin who resigned recently in order to assume the position of Associate Editor of Drug Topics and Drug Trade News. Dr. Louis D. King, B.S. and M.S. in Pharmacy from the University of South Carolina and Ph.D. from the University of Florida, has come to the staff as assistant professor of pharmacy. During the summer months a new dispensing laboratory and a new library have been provided. The latter has reading space for 70 students and stacks with a capacity of 15,000 volumes. The plans are to convert the old library space into an animal room and two class rooms. New facilities and equipment have been added to the instrument room, the physical chemistry laboratory and the pharmacology laboratory.—Lieutenant Commander Richard G. Kederska and Lieutenant Pierre Smith, USNR-R, completed a course of study on Insect and Rodent Control at the Naval Air Station, Jacksonville, Florida, during a two week tour of Naval Reserve duty.—David Frost, instructor in the biological sciences, spent six weeks of study and research during the summer at the Marine Biological Laboratories, Woods Hole Massachusetts.—Dr. Morton J. Rodman attended the International Physiological Congress and Pharmacology Seminar in Montreal, Canada, from August 31 to September 6.—Dr. Maurice Bender attended the Plant Science

Seminar and the Teachers' Seminar on Pharmacognosy at Salt Lake City during the week of August 10.

School of Pharmacy, Medical College of South Carolina.—Fourteen Bachelor of Science in Pharmacy degrees were conferred at the 129th commencement. William C. Peek and John W. Tucker were first and second honor graduates.—The laboratories were moved to the new quarters on the fourth floor of the Center Research building during the summer. The laboratory furniture in the pharmacy and dispensing laboratories has been painted and new equipment, including a still, analytical and dispensing balances has been acquired. The new quarters are modern in every respect, and are exceptionally well lighted and air-conditioned.—Dr. J. Hampton Hoch served as a member of the staff of the summer Seminar on Pharmacognosy in Salt Lake City in August.—Ina Horton, a junior student, was initiated in Rho Chi in April.—Several members of the Junior and senior classes visited the Lilly and the Upjohn laboratories in March.—The last state legislature passed a bill establishing a dental school in the Medical College.

University of South Carolina.—Dr. James A. Campbell has been appointed associate professor of pharmacy. His undergraduate training in pharmacy was at the University of South Carolina. His graduate work for the doctorate was done at Purdue where he held a Purdue Research Foundation Fellowship. He has contributed many articles to professional journals and is a registered pharmacist in South Carolina.—Prof. Robert C. Stokes attended the Pharmacognosy Seminar and other meetings held in Salt Lake City in August.—Prof. J. M. Plaxco, Jr., has been granted an additional leave of absence in order to continue studies for the doctorate at the University of Florida.—Dexter E. Evans, Captain in the Marine Corps has returned to school after a year on active duty in Korea.—Sixty-one students were enrolled in the summer session.—Prof. Don A. Galagno attended the summer session at New York University.

South Dakota State College.—The pharmacognosy laboratory has been moved to new quarters in the south wing of the administration building.—A new dispensing laboratory which will accommodate two sections of thirty students each is being used for the first time. Equipment for the new pharmacology laboratory was installed in September. The additional space allotted to the Division of Pharmacy permits of enlarged quarters for pharmaceutical chemistry and practical pharmacy.—The total enrollment for the Division is 155, forty of whom are freshmen.—At the June commencement, Dr. Earl R. Serles, now dean of the college of pharmacy of the University of Illinois, was awarded the honorary degree of Doctor of Science.—Dr. Harold S. Bailey has been named associate editor of the *South Dakota Journal of Medicine and Pharmacy*.—President Headley has appointed Dr. and Mrs. Guklford C. Cross sponsors for the incoming freshman class.

Southern College of Pharmacy.—Dr. H. Douglas Johnson who received the B.S., M.S., and Ph.D., degrees from the University of Florida assumed his duties as head of the department of pharmacology early in the second quarter of the last school year. During the summer vacation he gained some practical experience in hospital pharmacy by working in the Crawford W. Long Memorial Hospital Pharmacy.—Prof. Ernest Jacob spent the summer vacation working in a retail pharmacy in New Orleans.—Dr. Oliver M. Littlejohn assumed his duties as head of the department of pharmacy at the beginning of the fall quarter. Dr. Littlejohn holds bachelor's degrees in both chemistry and pharmacy from the University of North Carolina, and the M.S., and Ph.D., in pharmacy from the University of Florida.—Mrs. Bertha Jane Zackert, librarian, was awarded a scholarship for the summer session by the Medical Library Association and attended the course in Medical Libraries at Emory University at the end of the session.—Dean Melvin A. Chambers presented a paper entitled "Should State Board Applicants be Required to Identify Crude Drugs for Registration?" at the Third District meeting of the AACP and NABP.—Dr. Wei Chin-Liu, professor of pharmaceutical chemistry, attended summer school at Purdue University to take training in the technic and uses of radio-isotopes.—Prof. Charles R. Boyles, head of the department of biology, continued his graduate studies at Michigan State last summer.—Prof. Charles E. Taylor spent the summer in graduate work with courses at Georgia Institute of Technology and Emory University.—Seventy-five seniors were graduated at the June commencement. Dr. Goodrich C. White, President of Emory University gave the commencement address.—Gamma Psi Chapter of Kappa Psi was installed on March 6, by Grand Regent of the fraternity, Prof. Frank Eby, and Prof. Nicholas Feeny, Grand Historian. Membership certificates were presented to 23 graduate and 25 active members.—Dr. R. J. Martin who has been associated with the college since 1907 retired from active duty at the end of the school year in June and was a guest of honor at the annual alumni banquet at that time. In appreciation of his forty-six years of service, he was presented with an engraved silver pitcher from the students and faculty.—At the beginning of the fall quarter, a new course, one hour credit, two hours laboratory work in "Scientific Literature", was introduced. The course will survey reference and periodical material. A second course, "Introduction to Research" is designed to acquaint students with methods and technics of scientific investigation in pharmacy, pharmacognosy, and pharmaceutical chemistry.—The Atlanta Drug and Chemical Club has presented the college with a bronze plaque honoring the late Fred J. Lewis, a member of the club and long time trustee of the school.—David R. Reese, B.Sc. in Pharm., '52, received the M.S. degree from Ohio State University at the close of the summer session and has accepted a position with the Smith, Kline and French Laboratories of Philadelphia.—John Roskos, a June graduate is continuing in graduate work in pharmacology at the

University of Maryland where he has been given an assistantship in the department of pharmacology.

Southwestern State College, Oklahoma.—Edwin E. Brown, a recent graduate has assumed duties as a representative of the Lilly Company in Okmulgee.—R. C. Keppler, district sales manager of the Hoffman-Roche Drug Company of Dallas, Texas, discussed the "Opportunities for Pharmacists in the Drug Industry" before the student body in June.—Several members of the faculty attended the pharmacy meetings in Salt Lake City in August.—The faculty attended a meeting of the Southern District of the Oklahoma Pharmaceutical Association at Lake Murray in September.—The class in Hospital Pharmacy attended the dedication of the new Veterans Administration Hospital in Oklahoma City on October 4.—The College, in cooperation with the State Association and the Extension Division of the college conducted a pharmacy refresher seminar on October 22.—New faculty members added to the staff this year are: Mr. Lawrence R. McArthur, associate professor of pharmacy; Dr. George P. Cunningham and Mr. Earl A. Reynolds, each appointed as associate professor of chemistry.

St. Louis College of Pharmacy.—The college recently received substantial endowment gifts from Gaston F. DuBois and from the estate of the late Gustavus A. Pfeiffer.—Frank Winstead Martin, instructor in pharmacognosy and biology, was the recipient of the M.A. (in Botany) degree from Washington University (St. Louis) in June.—Eight members of the faculty, five of them accompanied by their wives, attended the Salt Lake City meetings in August.

University of Texas.—Gunnar Gjerstad, who obtained his undergraduate education at the University of Oslo, Norway, and recently completed work for the doctorate at Purdue under a Fullbright Fellowship, has been added to the staff as assistant professor of pharmacognosy.—Leon Wilkins, B.S., Howard College, Birmingham, M.S., University of Texas, has been appointed as instructor in pharmacy.—Drs. Gjerstad and Athers attended the Teachers' Seminar at Salt Lake City, the latter as a member of the teaching staff.—Dr. J. E. Davis presented a paper before the International Physiological Congress in Montreal, Canada, in September.—Four pharmacy students were graduated at the close of the summer session.—Mrs. Ruth Ham has resigned as chief pharmacist at the University Health Center and has been replaced by Miss Louise Pope who is a graduate of the University of Oklahoma and has pursued graduate studies in hospital pharmacy at the University of Maryland. She has had practical experience in the Johns Hopkins Hospital Dispensary and in the Bronson Methodist Hospital, Kalamazoo, Michigan.—Prof. Sheffield attended the University of North Carolina during the summer continuing work for the doctorate.

Texas Southern University.—Considerable new equipment has been purchased for the pharmacology and dispensing laboratories. Included are a basal metabolism apparatus, a Van Slyke-Neill blood gas apparatus, 12 new Torsion balances and six portable typewriters.—A Graybar tele-

phone system is being installed in the dispensing laboratory.—All members of the faculty have returned after summer study at other schools.—William Harrell has received the master's degree from the University of Texas.—Twenty-five freshman have enrolled for the fall semester.—The school served as headquarters for the Lone Star Medical Association on June 2, 3, 4.—The recent inspection by the American Council on Pharmaceutical Education gave the school of pharmacy an "A" rating.—The various student pharmaceutical organizations have combined their efforts under the direction of the APhA student branch to promote a program during national pharmacy week.—The faculty is revising the curriculum course content so as to minimize overlapping material with the hope that broader coverage of course work will be made possible.

University of Utah.—Many members of the staff took part in the integrated program of the Teachers Seminar on Pharmacognosy and the Plant Science Seminar which was held in the Union Building on the University campus during the week of August 10.—Four graduate students were co-authors with members of the faculty of papers which were read in the scientific section of the APhA during the week of August 16.—Dean L. David Hiner was elected a member of the Executive Committee of the AACP.—Dr. E. A. Swinyard was named to serve on the Planning Committee for the 1954 Teachers Seminar on Pedagogics.—Dr. George E. Osborne was chosen as secretary of the Historical Section of the APhA.—New graduate students this year are: Franklin R. Cole from Massachusetts College of Pharmacy; James C. Price from the University of Arkansas; and James D. McMahon and Howard V. Jensen, both from the University of Utah.

Medical College of Virginia, School of Pharmacy.—Dr. J. Doyle Smith, professor of organic chemistry, has been named chairman of the Medical College of Virginia Biological Seminar.—Mrs. Jack Ashby, a graduate student, has been appointed as instructor in the department of pharmaceutical chemistry.—Dean R. Blackwell Smith is continuing to serve on the Committee on Chemicals in Foods of the National Research Council.—Col. Frank P. Pitts, professor of chemistry and director of the Medical Service Corps of the 2079th ARASU, was retired from the United States Army on October 1.—The results of the 1953 prescription survey for Virginia conducted by Dr. John W. Boenigk, were published in the *Virginia Pharmacist* after having been presented at the Virginia Pharmaceutical Convention in June.—Dr. Warren E. Weaver will head the Entertainment Committee for the Virginia Section of the American Chemical Society during the coming year.—The college, beginning with the fall quarter, introduced a graduate program leading to the degree of Master of Science in Hospital Pharmacy. Requirements for admission are graduation from an accredited school or college of pharmacy and approval of the candidate by the Committee on Graduate Study. The course of study in Hospital Administration includes courses in organization and management, hospital services, staff relations, hospital purchases, and hospital pharmacy administration. In Pharmacy, the courses

include pharmaceutical technology, laboratory technology, manufacturing and manufacturing control. In Hospital Pharmacy Training a minimum of 1920 hours are required. Also required is attendance in biological seminar, departmental seminar, and the successful completion of a commendable and satisfactory research project of a pharmaceutical nature leading to the preparation of a thesis which meets the acceptance requirements of the Committee on Graduate Study. Requirements for the degree are: a minimum of 22 months in residence; satisfaction of language requirements (a satisfactory reading knowledge of scientific German or French); comprehensive examinations covering pharmacy and administrative courses; a final oral examination, following acceptance of the thesis by the Committee on Graduate Study.

University of Washington.—Dr. James Fairbairn, head of the department of pharmacognosy of the school of pharmacy, University of London, has been appointed to a one-year professorship at this college. The college has, as a teaching assistant for one year, Mr. F. Maurice Clark, a Fullbright scholar from the University of London. He will work for the master's degree and teach in the pharmacy laboratories. From the opposite side of the British Commonwealth, the college has appointed as a teaching assistant, Mr. Vasant Kudalkar who has the master's degree from Purdue University and will work at Washington for the doctorate. —Dr. Nathan Hall is now teaching the nurses at Virginia Mason Hospital.—A new conference room has been provided for the department of pharmacognosy.—Dr. Heber Youngken, Jr., has been elected to the Executive Committee of the AACP and to the chairmanship of the Scientific Section of the APhA.—Dr. E. M. Plein is a member of the House of Delegates of the APhA from the practical pharmacy section.

State College of Washington.—The entire staff attended the meetings in Salt Lake City in August.—Dr. A. I. White was elected to the Council of Rho Chi.—Drs. White, Martin, and Hammarlund worked in drug stores during the summer months.—Dean Haakon Bang and Dean Forrest Goodrich of the University of Washington held a panel discussion on the proposed one year of general college training in addition to high school graduation for entrance to a college of pharmacy at the recent Washington State Pharmaceutical Convention at Bellingham.—New equipment include a sterile transfer chamber, an additional Wiley drug mill, a thermostatically controlled water bath and visocardiette (EGG).—Dr. V. N. Bhatia has been allocated funds under State Initiative 171 for the purpose of carrying out research in certain aspects of ointment formulations.

University of Wyoming.—A number of Wyoming high school graduates, attending the annual meeting of Boys' State at the University of Wyoming Recreation Camp in June, were given a guided tour through the college of pharmacy.—Dr. Theodore O. King, associate professor of pharmacology, attended the University of Michigan College of Law

during the summer session. During the past two years Dr. King has been taking various courses in law at the University of Wyoming College of Law.—Prof. Ramona Parkinson, associate professor of pharmacy administration, has been given leave of absence for the current academic year to continue her studies toward the doctorate at the Ohio State University.—Dean David D. O'Day was the commencement speaker at the graduation exercises of the Wyoming Girls School in Sheridan on June 26.—Mrs. Cleota Meyer, emergency instructor in pharmacy and Dean O'Day attended the Teachers' Seminar on Pharmacognosy at Salt Lake City in August.—Dr. R. H. Deniston, II, associate professor of zoology and physiology assumed his duties after having spent last year in study in other institutions under a Ford Foundation Fellowship.—Prof. Jack N. Bone, assistant professor of pharmacy, took and passed his final examination for the doctorate at the University of Washington in August and will be awarded the degree at the next commencement.—Dean and Mrs. Joseph B. Sprowls and four children of Temple University, Dr. and Mrs. Frank P. Cosgrove of the University of Nebraska, and Dr. and Mrs. Elmer M. Plein of the University of Washington were campus visitors in August.—Drs. Ernest Schierz and Fred Freytag attended the meetings of the American Chemical Society at Chicago in September.

Miscellaneous Items of Interest

A MEMORIAL

ROBERT LATTA CROWE

Roberta Latta Crowe, whose name was synonymous with the growth and development of Pharmacy in Tennessee, died at the Baptist Memorial Hospital in Memphis, Sunday, July 26.

Dr. Crowe became ill at his home the night before. Death was attributed to a heart ailment.

One of the oldest members of the University of Tennessee Medical Units faculty in years of service, Dr. Crowe had been connected with the School of Pharmacy for almost 43 years, and had been dean of the school since August 1, 1936.

A lover of people, as few men are, Dean Crowe probably was known and admired more than any other member of the University's faculty. He was interested in the welfare of both the students and his graduates, who regarded him as a friend. When motoring through the Mid-South

he took pride in recalling the names of the druggists and the location of their stores; he visited them frequently.

One of the organizers of the Memphis Drug Club, Dean Crowe had served as its secretary for many years, and also was active in both the Tennessee and American Pharmaceutical Associations. He probably influenced the advancement of the pharmaceutical profession in the Mid-South more than any other one man.

Born on a farm near Dyersburg, Tennessee in 1887, he moved with his parents to Memphis in 1889 where his father enrolled in the Old Memphis Hospital Medical College. After his graduation, his father practiced medicine in Newbern, Tennessee and later moved to Carruthersville, Missouri. As a young man Dean Crowe enrolled in the Jackson Military Academy where he was graduated with honors in 1908. In the Fall of that year, he entered Ohio State University and was graduated as a pharmaceutical chemist. In the Fall of 1910, he entered the College of Physicians and Surgeons in Memphis. In 1911 the board of trustees of the University moved the College of Medicine to Memphis, and it was consolidated with the College of Physicians and Surgeons.

Because of his knowledge of pharmacy, Dr. Crowe, while still a student, was placed in charge of the dispensary and taught pharmacy and pharmacology. Soon after the consolidation of the Medical School, the Department of Pharmacy was established as a separate school from the Medical College.

Dr. Crowe decided to become a teacher rather than a physician and did not complete his medical training. He was, however, licensed by examination to practice medicine in Tennessee and Mississippi. He frequently prescribed for members of the staff and students without benefit of payment.

His devotion to pharmacy earned him steady advancement in rank. In 1926 he was made professor and chief of the Division of Pharmacy and was appointed dean in 1936. Under his leadership pharmacy developed to an important school with high academic standing. Dean Crowe believed a School of Pharmacy should serve the profession and the community, and he altered the course of study to meet ever-changing needs.

As a medical student, he was a charter member of Alpha Kappa Kappa, medical fraternity, and for years was faculty advisor. He was a charter member and national officer of Phi Delta Chi pharmacy fraternity. Dean Crowe served on numerous faculty committees and almost invariably pleaded the cause of the students before other members.

A man of many talents, Dean Crowe was an enthusiastic hunter and fisherman. A tireless gardener, his yard was a show place. He tended blooming plants with unusual devotion.

If an institution be the lengthened shadow of a man, the University of Tennessee School of Pharmacy stands as a perpetual tribute and memorial to Dr. ROBERT LATTA CROWE, its dean, who died suddenly Sunday.

The teaching of pharmacy, in an age when the science expands and becomes more complex almost by the hour, was more than a profession for DR. CROWE; it was a way of life. And yet he had time and energy for so many other interests—music, gardening, building and heartfilling associations with his fellow men in all walks of life.

He was a member of the pharmacy school when the first instruction in that art was offered here. He was the oldest member of the U-T Medical Units faculty in years of service, and certainly he was one of the best beloved.

All over this Mid-South the mark of his hand and personality are found where healing elements are compounded and dispensed, and those marks will stand for a long time as a tribute to him as scientist and man.

His model pharmacy, set up to demonstrate to students how a dispensary should be arranged and operated, claimed wide attention; through it he was able to teach students that their calling demanded efficiency and accuracy plus great human understanding.

He made a benediction out of his life.

Funeral services were held in Memphis July 27.

Survivors are Mrs. Margaret McEwen Crowe; two daughters, Mrs. L. B. Snapp of Nashville and Mrs. Harold G. Barker of Humboldt, Tennessee, and a brother, Roger Crowe of Stuttgart, Arkansas.

A TRIBUTE TO S. BARKSDALE PENICK*

On behalf of the Board of Directors, the officers and the staff of Health Information Foundation, we pay heartfelt tribute to the memory of S. Barksdale Penick, who was among the first to see the need for Health Information Foundation and who, from the organization's inception until his untimely death, gave unstintingly of his services as Treasurer, a Director, and a member of the Executive, Operating and Finance Committees.

Mr. Penick believed in the goodness of his country and in the unswerving ethics of his industry. Armed with this faith, he worked unceasingly to bring ever higher purpose and meaning to all the activities of the Foundation. He never missed a meeting to which he was called, nor sought respite when his advice and effort were needed; for in Health Information Foundation he saw an unusual opportunity for the fulfillment of a grave responsibility he felt for himself personally and for the drug industry to help strengthen the well-being of the American people.

He was particularly concerned with his financial stewardship of the Foundation. He knew that only through the wise and carefully considered expenditure of its funds could the Foundation program be effective through the years: With the inspiring example of S. Barksdale

*This is the text of a scroll paying tribute to S. Barksdale Penick by the Health Information Foundation. It shows the breadth of Mr. Penick's interest and the sincerity of his purpose and the respect in which he was held outside of his special field. The pharmaceutical industry and the profession of pharmacy are both proud of and grateful for the pattern of his life and service.—Editor.

Penick always before us, we pledge to carry on his work, that his vision of the future may be realized.

(signed)

John G. Searle
Chairman of the Board
September 14, 1953

(signed)

Admiral W. H. P. Blandy, USN (Ret).
President

**MINUTES OF THE JUNE 29, 1953 MEETING OF THE EXECUTIVE
COMMITTEE OF THE AMERICAN FOUNDATION FOR
PHARMACEUTICAL EDUCATION IN NEW YORK, N. Y.**

The Committee was called to order by President Robert L. Swain. The Committee then paused in silent tribute to the memory of the late Mr. S. P. Penick. The following resolution was adopted unanimously.

Be It Resolved that the American Foundation for Pharmaceutical Education extends its deepest sympathy to the family of Sydnor Barksdale Penick.

Mr. Penick was one of the Founders of the American Foundation for Pharmaceutical Education and a signer of the Articles of Incorporation. At the time of his passing he was an active Director and previously he had served long and effectively as Treasurer and as a member of the Executive Committee. We of the Foundation are certain that his devotion to the Foundation was only exceeded by his devotion to his family.

Among the many leaders of the drug industry who gave so freely of their services to first create, and then to develop, the American Foundation for Pharmaceutical Education, Mr. Penick stands out in bold relief. In every sense he merited the high respect in which he was held by everyone of his associates in this organization. His unselfish and untiring efforts contributed greatly to the present strength of the Foundation and its opportunities for service in the profession and industry he so long loved and served.

His kindly leadership, his inspiring guidance, his ever sound advice and farsightedness will be constantly missed by his associates in the American Foundation for Pharmaceutical Education. But the Foundation will stand, in a substantial measure, as a continuing testimonial to his productive life; and the many teachers and pharmacists, whose education

*These minutes were abstracted by the Editor from a report furnished him by Secretary W. Paul Briggs.

he helped to make possible, will long remember our distinguished colleague.

And Be It Further Resolved that the American Foundation for Pharmaceutical Education shall always be mindful of the contributions of Sydnor Barksdale Penick, and by all appropriate means seek to carry on his work and perpetuate his memory.

/s/ Robert L. Swain, President
June 29, 1953

The Secretary advised of the election of a vice-chairman of the Board of Grants as suggested by Chairman Guy Stanton Ford at the May 19 meeting of the Board. The Board of Grants selected Dr. Ernest Little for this position.

The Secretary announced the removal of the Foundation office, which had formerly been approved, from New York to 1507 M Street, N.W., Washington 5, D. C., Room 800. This was completed on June 15, 1953. The saving of rent over the New York location by this move will amount to approximately \$900 annually. In one year this exceeds the expense of moving.

An annual honorarium of \$100 was approved for the chairman of the Newcomb Memorial Awards Committee to be paid from the income of that fund, when and to the extent available, or from administrative funds.

President Swain reviewed the background and various aspects of the prepared solicitation campaign among retail druggists. The program was added to the agenda and made subject to reconsideration. After extensive discussion it was considered advisable to hold in abeyance all action on this matter pending further consideration and direction by the Board of Directors.

President Swain urged consideration of ways and means to further advance the position and support to the Foundation. The effectiveness of Patrons' Certificates, Seals, and general publicity was fully discussed. Mr. James J. Kerrigan volunteered to start this effort through an article in *The Merck Report*. It was the consensus of the members that this and similar informational publicity through industry media would be highly productive. Further consideration was given to other possible promotional efforts via booklets, news notes, etc. Many constructive suggestions were made and will be utilized in developing future material for the Foundation.

Subsequent to this meeting, Dr. Guy Stanton Ford submitted his resignation as chairman and member of the Board of Grants, effective Aug. 31, 1953. After consultation with the President, the Secretary, in the name of the officers of the Foundation, his resignation was accepted with appreciation for services rendered.

New Books

General Biochemistry by Joseph S. Fruton, Professor of Biochemistry and Sofia Simmonds, Assistant Professor of Biochemistry and Microbiology, both of Yale University. 1953. 940 pp. Illustrated. John Wiley and Sons, Inc. Price \$10.

As the authors state—the book presents the dynamic aspects of the subject of general biochemistry against a background of structural biochemistry and focuses attention on principles, drawing illustrative data from studies with plants and microorganisms as well as animals. The book is based upon a course in general biochemistry given at Yale intended primarily for candidates for the doctorate in the biological sciences and in chemistry but it has also been attended by qualified seniors and by students of medicine, and by postdoctoral research students in the medical sciences. The response from these various groups toward the course has strengthened the views of the authors that the teaching of biochemistry for its own sake, quite apart from its application to special fields, is an essential component in the scientific education of the biologist or chemist. It is the authors hope that the book may prove useful to students who wish to examine the structure of modern biochemistry from a general point of view.

Chapter 1 gives the scope and history of biochemistry. The remainder of the book is divided into seven parts which cover the general properties of proteins, the general chemistry of the enzymes, biological oxidation, intermediate metabolism of carbohydrates, intermediate metabolism of lipids, intermediate metabolism of nitrogen compounds, and the general aspects of metabolism. The inclusion of a large number of biological references is especially commendable in a scientific area whose experimental basis is still in rapid flux. In the mind of the general book reviewer it seems that this text is the last word in the presentation of the problems in this field.—R.A.L.

On May 20, 1953, at a special meeting of the Board of Directors of the American Foundation for Pharmaceutical Education, Mr. George V. Doerr, vice-president of McKesson and Robbins, Inc., was unanimously elected Honorary President of the Foundation. Mr. Doerr is the first man to be so honored by the Foundation. He was president of the Foundation from 1942 to 1949, and a member of the Executive Committee through 1952. The Board of Directors elevated Mr. Doerr to the Honorary Presidency in appreciation for and in recognition of his constructive and distinguished services to the Foundation over the past ten years.

INSTITUTIONS HOLDING MEMBERSHIP IN THE AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY

New Mexico

University of New Mexico, College of
Pharmacy, Albuquerque. (1962)
E. L. Cataline, Dean

New York

University of Buffalo, School of Phar-
macy, Buffalo. (1939)
A. B. Lemon, Dean
Columbia University, College of Phar-
macy of the City of New York. (1939)
E. E. Leuallen, Dean
Fordham University, College of Phar-
macy, New York. (1939)
James H. Kidder, Dean
Long Island University, Brooklyn Col-
lege of Pharmacy, Brooklyn. (1939)
Hugo H. Shaefer, Dean
St. John's University, College of Phar-
macy, Brooklyn. (1951)
John L. Dandreaux, Dean
Union University, Albany College of
Pharmacy, Albany. (1946)
Francis J. O'Brien, Dean

North Carolina

University of North Carolina, School
of Pharmacy, Chapel Hill. (1917)
E. A. Brecht, Dean

North Dakota

North Dakota Agricultural College,
School of Pharmacy, Fargo. (1922)
W. F. Sudro, Dean

Ohio

Ohio Northern University, College of
Pharmacy, Ada. (1925)
Albert C. Smith, Dean
University of Cincinnati, Cincinnati
College of Pharmacy. (1947)
J. F. Kowalewski, Dean
Ohio State University, College of
Pharmacy, Columbus. (1900)
B. V. Christensen, Dean
University of Toledo, College of Phar-
macy, Toledo. (1941)
Charles H. Larwood, Dean

Oklahoma

Southwestern State College, School of
Pharmacy, Weatherford. (1951)
W. D. Strother, Dean
University of Oklahoma, College of
Pharmacy, Norman. (1905)
Ralph W. Clark, Dean

Oregon

Oregon State College, School of Phar-
macy, Corvallis. (1915)
George E. Crossen, Dean

Pennsylvania

Duquesne University, School of Phar-
macy, Pittsburgh. (1927)
Hugh C. Muldoon, Dean
Philadelphia College of Pharmacy and
Science, Philadelphia. (1900)
Ivor Griffith, Dean
Temple University, School of Pharma-
cy, Philadelphia. (1928)
Joseph B. Sprowls, Dean
University of Pittsburgh, School of
Pharmacy, Pittsburgh. (1900)
Edward C. Reiff, Dean

Philippines

University of the Philippines, College
of Pharmacy, Quezon City. (1917)
Petrocinio Valenzuela, Dean

Puerto Rico

University of Puerto Rico, College of
Pharmacy, Rio Piedras. (1926)
Luis Torres-Diaz, Dean

Rhode Island

Rhode Island College of Pharmacy and
Allied Sciences, Providence. (1926)
W. Henry Rivard, Dean

South Carolina

Medical College of South Carolina,
Charleston. (1940)
William A. Frost, Dean
University of South Carolina, School
of Pharmacy, Columbia. (1928)
Robert W. Morrison, Dean

South Dakota

South Dakota State College, Division
of Pharmacy, Brookings. (1908)
Floyd J. LeBlanc, Dean

Tennessee

University of Tennessee, School of
Pharmacy, Memphis. (1914)
Karl J. Goldner, Dean

Texas

Texas Southern University, School of
Pharmacy, Houston. (1952)
Hurd M. Jones, Dean
University of Houston, College of
Pharmacy, Houston. (1952)
N. M. Ferguson, Dean
University of Texas, College of Phar-
macy, Austin. (1926)
Henry M. Burlage, Dean

Utah

University of Utah, College of Phar-
macy, Salt Lake City. (1951)
L. David Hiner, Dean

Virginia

Medical College of Virginia, School of
Pharmacy, Richmond. (1908)
R. B. Smith, Dean

Washington

State College of Washington, School of
Pharmacy, Pullman. (1912)
Haakon Bang, Dean
University of Washington, College of
Pharmacy, Seattle. (1908)
Forest J. Goodrich, Dean

West Virginia

West Virginia University, College of
Pharmacy, Morgantown. (1920)
J. Lester Hayman, Dean

Wisconsin

University of Wisconsin, School of
Pharmacy, Madison. (1900)
Arthur H. Uhl, Dean

Wyoming

University of Wyoming, College of
Pharmacy, Laramie. (1951)
David W. O'Day, Dean

FELLOWSHIPS IN PHARMACY

To meet the demonstrated need for trained teachers and researchers in the field of pharmacy, the American Foundation for Pharmaceutical Education announces a limited number of Fellowships for students seeking graduate degrees in pharmaceutical subjects.

These Fellowships are open to students (men or women) qualified for registration in approved graduate schools (or colleges) for one or more of the following major fields:

PHARMACY
PHARMACEUTICAL CHEMISTRY
PHARMACOLOGY
PHARMACOGNOSY
PHARMACY ADMINISTRATION
(or closely related subjects)

Each Fellow will receive from the Foundation a stipend to cover the period of his appointment and, when not provided for from other sources, an allowance for academic expenses. Normally, new Fellowships are started only in September and February. New applications and requests for renewals of grants should be submitted at least 60 days prior to desired starting date or expiration date. Fellowships are renewable.

For further information concerning Foundation Fellowships, including application forms, write directly to the

Secretary,

**AMERICAN FOUNDATION FOR PHARMACEUTICAL
EDUCATION**

1507 M Street, N. W.

Washington 5, D.C.
